

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
F.A.U. 6385	00-00182-01-BR	McLEAN	33	1
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT - BRM-5227(43)	
CONTRACT NO. 87269				

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**PLANS FOR PROPOSED**

**BRIDGE REPLACEMENT AND REHABILITATION PROGRAM**

- INDEX OF SHEETS**
1. COVER SHEET
  2. SUMMARY OF QUANTITIES AND GENERAL NOTES
  3. SCHEDULE OF QUANTITIES
  - 4.-5. TYPICAL CROSS SECTIONS
  6. PLAN AND PROFILE
  7. INTERSECTION DETAILS
  8. STRIPING PLAN
  9. DETOUR GENERAL NOTES
  10. DETOUR PLAN
  - 11.-15. STATION CROSS SECTIONS MAIN LINE
  16. STATION CROSS SECTIONS SIDE ROAD
  - 17.-31. BRIDGE PLANS
  - 32.-33. BORINGS

SCALES

PLAN	0' = 50'
PROFILE HORIZ.	0' = 50'
PROFILE VERT.	0' = 5'
CROSS SECTIONS	0' = 5'

**PROJECT BRM-5227(43)**  
**SECTION 00-00182-01-BR**

**F.A.U. 6385 /C.H. 70**  
**OVER SUGAR CREEK**  
**McLEAN COUNTY**

**C-93-092-04**  
**PROPOSED STRUCTURE NO. 057-5306**

**HIGHWAY STANDARDS:**

- 420001-06 PAVEMENT JOINTS
- 420401-05 BRIDGE APPROACH PAVEMENT
- 515001-02 NAME PLATE FOR BRIDGES
- 542401 METAL END SECTION FOR PIPE CULVERTS
- 606001-02 CONCRETE CURB TYPE B AND COMBINATION CURB AND GUTTER
- 609006-02 BRIDGE APPROACH PAVEMENT (DRAIN DETAIL)
- 630001-05 STEEL PLATE BEAM GUARDRAIL
- 630301-03 SHOULDER WIDENING FOR TYPE 1, (SPECIAL) GUARDRAIL TERMINALS
- 631031-05 TRAFFIC BARRIER TERMINAL, TYPE 6
- 635006-02 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 635011-01 REFLECTOR MARKER AND MOUNTING DETAILS
- 701101-01 OFF ROAD OPERATIONS, MULTILIANE, 4.5m(15') TO 600mm(24") FROM PAVEMENT EDGE
- 702001-05 TRAFFIC CONTROL DEVICES
- 780001-01 TYPICAL PAVEMENT MARKINGS
- 781001-02 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
- 000001-04 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
- BLR 21-6 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

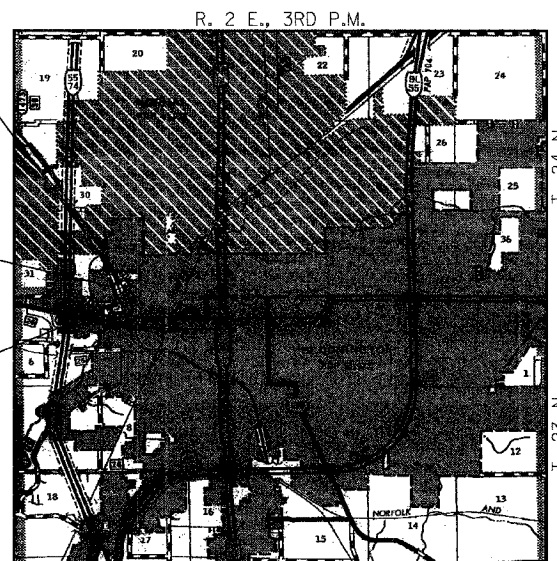
**UTILITIES**

- |   |   |
|---|---|
| CITY OF BLOOMINGTON<br>401 1/2 S. EAST ST., PO BOX 3157<br>BLOOMINGTON, ILLINOIS 61702-3157<br>(309) 434-2225<br>RUSSEL C. WALLER | AMEREN IP<br>501 E. LAFAYETTE<br>BLOOMINGTON, IL 61701<br>(309) 823-9271<br>MARTY BEHRENS               |
| TOWN OF NORMAL<br>100 E. PHOENIX AVE., PO BOX 589<br>NORMAL, ILLINOIS 61761-0589<br>(309) 454-2444<br>GENE BROWN                  | VERIZON<br>1312 E. EMPIRE ST., PO BOX 2955<br>BLOOMINGTON, IL 61702-2955<br>(309) 663-3156<br>MIKE HOPE |

IMPROVEMENT BEGINS  
STATION 817+50

STATION 820+21.00 - SPECIAL BRIDGE DESIGN  
CONTINUOUS STEEL WF BEAM BRIDGE WITH  
CAST-IN-PLACE CONCRETE DECK.  
3 SPANS: 45'-0", 60'-0", 60'-0"; 40'-10" RDWY.  
44'-0" O.-O. DECK; SKEW = 35°  
EXISTING STR. NO. 057-0074

IMPROVEMENT ENDS  
STATION 822+50

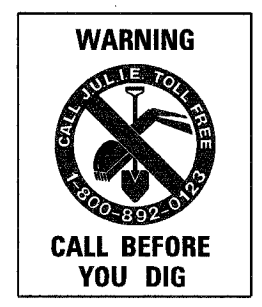
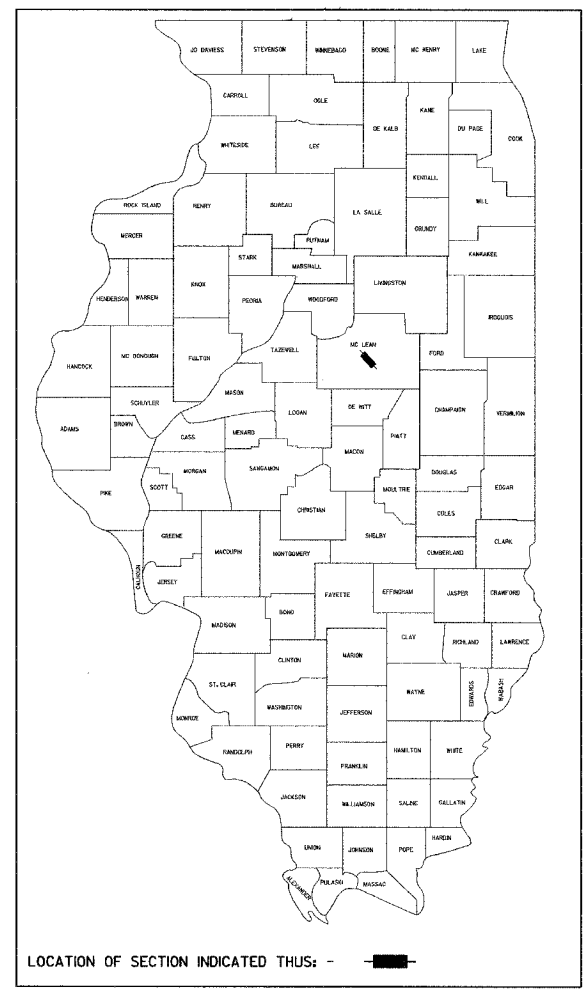


**LAYOUT**

APPROXIMATE SCALE: 0 1 MILE  
NET LENGTH OF SECTION = 500 FEET = 0.095 MILES

DESIGN FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL  
DESIGN TRAFFIC: 5,900 ADT (2005)  
DESIGN SPEED: 45 M.P.H.

CONTRACT NO. 87269



APPROVED: 11-16-2005  
Joel Mitchell  
COUNTY ENGINEER

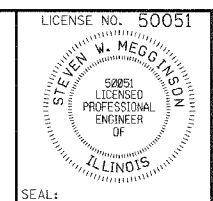
PASSED: 11/21-2005  
[Signature]  
DISTRICT THREE ENGINEER OF  
LOCAL ROADS & STREETS

APPROVED: 11/21-2005  
Greg Monte  
DEPUTY DIRECTOR OF HIGHWAYS  
REGION TWO ENGINEER  
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DATE: November 15, 2005

BY: Stewart W. Aggins

LICENSE EXPIRES: NOVEMBER 30, 2005



**Rice, Berry and Associates**  
A Division of Hampton, Lenzini and Renwick, Inc.  
Civil & Structural Engineers  
3085 Stevenson Drive  
Suite 201  
Springfield, Illinois 62703  
217-546-3400

Account Number  
12-59-0033-1  
P.O. Box 1036  
DuQuoin, Illinois 62832  
618-790-4637

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
F.A.U. 6385	00-00182-01-BR	McLEAN	31	2
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT - BRN-827403	

**GENERAL NOTES**

CONTRACT NO. 87269  
 ROAD AND BRIDGE CONSTRUCTION,

ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 2002," THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.

ALL CLEARING AND GRUBBING AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE CONSIDERED INCIDENTAL TO EARTH EXCAVATION. THE REMOVAL OF THE EXISTING BITUMINOUS SURFACE WILL BE PAID FOR AS BITUMINOUS SURFACE REMOVAL OR PAVEMENT REMOVAL. ALL BITUMINOUS MATERIAL SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR IN A METHOD APPROVED BY THE ENGINEER.

THE LOCATIONS OF EXISTING GAS MAINS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE, BUT THE LOCATIONS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE INDIVIDUAL UTILITY COMPANIES AND BY FIELD INSPECTION.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT-OF-WAY AS DIRECTED BY THE ENGINEER.  
**SEEDING, CLASS 2A (SPECIAL) = 0.28 ACRES**

THE CONTRACTOR SHALL NOT OPERATE PAVEMENT ROLLERS ON AREAS OF BRIDGE DECK GROOVING.

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

BITUMINOUS CONCRETE	112 LB/IN/SQ YD
POROUS GRANULAR EMBANKMENT	2.0 TON/CU YD
AGGREGATE SHOULDERS	2.0 TON/CU YD
BITUMINOUS MATERIALS (PRIME COAT):	0.1 GAL/SQ YD OR 0.35 GAL/SQ YD
STONE RIPRAP	1.75 TON/CU YD
AGGREGATE (PRIME COAT)	4 LB/SQ YD
AGGREGATE COURSE TYPE B	2.0 TON/CU YD SHRINKAGE FACTOR = 1.15

SUMMARY OF QUANTITIES				
CODE NO	ITEM	UNIT	CONSTRUCTION CODE	
			1000	X071-2A TOTAL
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	116	116
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	32	32
20200100	EARTH EXCAVATION	CU YD	190	190
20300100	CHANNEL EXCAVATION	CU YD		220
20400800	FURNISHED EXCAVATION	CU YD	440	440
20700110	POROUS GRANULAR EMBANKMENT	TON		250
25001020	SEEDING, CLASS 2A (SPECIAL)	ACRE	0.28	0.28
25100630	EROSION CONTROL BLANKET	SQ YD	921	921
28101500	RIPRAP, SPECIAL	SQ YD		1060
31100300	SUB-BASE GRANULAR MATERIAL, TYPE A 4"	SQ YD	302	302
35101400	AGGREGATE BASE COURSE, TYPE B	TON	110	110
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	169	169
40600980	BITUMINOUS SURFACE REMOVAL - BUTT JOINT	SQ YD	426	426
42001165	BRIDGE APPROACH PAVEMENT	SQ YD		282
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	56	56
44000100	PAVEMENT REMOVAL	SQ YD	500	500
44000400	GUTTER REMOVAL	FOOT	155	155
44300300	AREA REFLECTIVE CRACK CONTROL TREATMENT, SYSTEM A	SQ YD	693	693
48101200	AGGREGATE SHOULDERS, TYPE B	TON	152	152
48202000	BITUMINOUS SHOULDERS SUPERPAVE	TON	90	90
50100100	REMOVAL OF EXISTING STRUCTURES	EACH		1
50104650	SLOPE WALL REMOVAL	SQ YD	765	765
50300225	CONCRETE STRUCTURES	CU YD	83.0	83.0
50300255	CONCRETE SUPERSTRUCTURE	CU YD	249.4	249.4
50300260	BRIDGE DECK GROOVING	SQ YD	763	763
50300300	PROTECTIVE COAT	SQ YD	903	903
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	1
50500505	STUD SHEAR CONNECTORS	EACH	3042	3042
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	73100	73100
51201500	FURNISHING STEEL PILES HP10X57	FOOT	1300	1300
51202700	DRIVING STEEL PILES	FOOT	1300	1300
51203500	TEST PILE STEEL HP10X57	EACH	2	2
51204315	CONCRETE ENCASEMENT	CU YD	28.8	28.8
51500100	NAME PLATES	EACH	1	1
54215547	METAL END SECTIONS 12"	EACH	1	1
60103500	PIPE DRAINS, CORRUGATED STEEL 12" (PRECOATED GALVANIZED)	FOOT	15	15
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	142	142
60900315	TYPE D INLET BOX, STANDARD 609006	EACH	1	1
60900515	CONCRETE THRUST BLOCKS	EACH	1	1
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	125	125
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	3	3
63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4	4
63100215	TRAFFIC BARRIER TERMINAL, TYPE 6 (SPECIAL)	EACH	1	1
67100100	MOBILIZATION	L SUM	1	1
70102550	TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR	L SUM	1	1
78200400	GUARDRAIL REFLECTORS	EACH	11	11
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	13	13
X4066424	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N50	TON	82	82
X4066614	BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19.0, N50	TON	115	115
X4066765	LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50	TON	40	40
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1	1
X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1	1
Z0002600	BAR SPLICERS	EACH	84	84
Z0017900	DRAINAGE SCUPPERS	EACH	5	5
XX004199	AGGREGATE BASE COURSE SPECIAL (6")	TON	178	178

\* -SEE SPECIAL PROVISIONS

MIXTURE REQUIREMENTS	
LOCATION(S):	CH 70 (WHITE OAK DR.) AND WEST GRAHAM ST.
MIXTURE USE(S):	BITUMINOUS CONCRETE SURFACE SUPERPAVE
AC/PG:	PG 64-22
RAP % (MAX):	15%
DESIGN AIR VOIDS:	4% @ Ndes 50
MIXTURE COMPOSITION:	
(GRADATION MIXTURE):	IL 9.5 OR IL 12.5
FRICTION AGGREGATE:	MIXTURE D
MIXTURE WEIGHTS:	112 LBS / SY / INCH THICKNESS

MIXTURE REQUIREMENTS	
LOCATION(S):	CH 70 (WHITE OAK DR.) AND WEST GRAHAM ST.
MIXTURE USE(S):	BITUMINOUS CONCRETE BINDER COURSE SUPERPAVE
AC/PG:	PG 64-22
RAP % (MAX):	25%
DESIGN AIR VOIDS:	4% @ Ndes 50
MIXTURE COMPOSITION:	
(GRADATION MIXTURE):	IL 19.0
FRICTION AGGREGATE:	NONE
MIXTURE WEIGHTS:	112 LBS / SY / INCH THICKNESS

MIXTURE REQUIREMENTS	
LOCATION(S):	CH 70 (WHITE OAK DR.)
MIXTURE USE(S):	LEVELING BINDER (MACHINE METHOD) SUPERPAVE
AC/PG:	PG 64-22
RAP % (MAX):	25%
DESIGN AIR VOIDS:	4% @ Ndes 50
MIXTURE COMPOSITION:	
(GRADATION MIXTURE):	IL 9.5 OR IL 12.5
FRICTION AGGREGATE:	NONE
MIXTURE WEIGHTS:	112 LBS / SY / INCH THICKNESS

MIXTURE REQUIREMENTS	
LOCATION(S):	SHOULDERS
MIXTURE USE(S):	BITUMINOUS SHOULDERS SUPERPAVE (TOP LIFT)
AC/PG:	PG 64-22
RAP % (MAX):	10%
DESIGN AIR VOIDS:	4% @ Ndes 50
MIXTURE COMPOSITION:	
(GRADATION MIXTURE):	IL 9.5 OR IL 12.5
FRICTION AGGREGATE:	MIXTURE C
MIXTURE WEIGHTS:	112 LBS / SY / INCH THICKNESS

MIXTURE REQUIREMENTS	
LOCATION(S):	SHOULDERS
MIXTURE USE(S):	BITUMINOUS SHOULDERS SUPERPAVE (BOTTOM LIFT)
AC/PG:	PG 58-22
RAP % (MAX):	25%
DESIGN AIR VOIDS:	4% @ Ndes 50
MIXTURE COMPOSITION:	
(GRADATION MIXTURE):	IL 19.0
FRICTION AGGREGATE:	NONE
MIXTURE WEIGHTS:	112 LBS / SY / INCH THICKNESS

MIXTURE REQUIREMENTS	
LOCATION(S):	DRIVEWAYS
MIXTURE USE(S):	INCIDENTAL BITUMINOUS SURFACING
AC/PG:	PG 64-22
RAP % (MAX):	15%
DESIGN AIR VOIDS:	4% @ Ndes 50
MIXTURE COMPOSITION:	
(GRADATION MIXTURE):	IL 9.5 OR IL 12.5
FRICTION AGGREGATE:	NONE
MIXTURE WEIGHTS:	112 LBS / SY / INCH THICKNESS

**HLR**  
 Rice, Berry and Associates  
 A Division of Hampton, Lenzini and Renwick, Inc.  
 Civil & Structural Engineers  
 3085 Stevenson Drive  
 Suite 201  
 Springfield, Illinois 62703  
 217-546-3400  
 P.O. Box 1036  
 DuQuoin, Illinois 62832  
 618-790-4637  
 Account Number: 12-59-0033-1  
 Date: 11/15/05  
 DESIGNED: L.F.S. | CHECKED: S.W.M. | DRAWN: D.T.M.

**SUMMARY OF QUANTITIES**

SECTION 00-00182-01-BR  
 F.A.U. 6385 / C.H. 70  
 McLEAN COUNTY

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
F.A.U. 6385	00-00182-01-BR	McLEAN	33	3
FED. ROAD DIST. NO.		ILLINOIS PROJECT: MPO-822743		

CONTRACT NO. 87269

LOCATION	ROADWAY SCHEDULE														
	BRIDGE APPROACH PAVEMENT	FLEXIBLE PAVEMENT CONNECTOR	SUBBASE GRAN. MATL. TYPE A	BITUMIONUS SURF CSE SUPERPAVE MIX "D", N50	BITUMIONUS BINDER CSE SUPERPAVE IL-19.0 N50	LEVELING BINDER MACHINE METHOD SUPERPAVE N50	BITUMIONUS SHOULDER SUPERPAVE	AGGREGATE SHOULDER TYPE B	AGGREGATE BASE CSE SPECIAL	AGGREGATE BASE CSE TYPE B	BITUMIONUS SURFACE REMOVAL BUTT-JOINT	BITUMIONUS MATERIAL PRIME COAT	AREA REFLECTIVE CRACK CONTROL SYSTEM A	GUTTER REMOVAL	PAVEMENT REMOVAL
	SQ YD	SQ YD	SQ YD	TON	TON	TON	TON	TON	TON	TON	SQ YD	GAL	SQ YD	FOOT	SQ YD
STA 817+50 TO STA 819+37.30	141	28	151	34	45	17	68	97			213	40	403		122
STA 821+05.35 TO STA 822+50	141	28	151	32	43	23	22	55	57	37	213	62	290	31	156
W GRAHAM ST.				16	27				121	73		67		124	222
TOTAL	282	56	302	82	115	40	90	152	178	110	426	169	693	155	500

TREE REMOVAL (6 TO 15 UNITS)	
LOCATION	FOOT
CH 70	
40' LT. STA. 817+88	6
43' LT. STA. 818+53	6
37' LT. STA. 818+68	12
52' LT. STA. 819+30	8
52' LT. STA. 819+40	6
52' LT. STA. 819+40	6
26' RT. STA. 819+40	8
26' RT. STA. 819+40	8
26' RT. STA. 819+40	8
26' RT. STA. 819+40	8
34' RT. STA. 819+52	8
34' RT. STA. 819+52	8
34' RT. STA. 819+52	8
43' RT. STA. 819+54	8
43' RT. STA. 819+54	8
TOTAL	116

TREE REMOVAL (OVER 15 UNITS )	
LOCATION	FOOT
CH 70	
48' LT. STA. 820+05	18
40' RT. STA. 821+06	14
TOTAL	32

LOCATION	GUARDRAIL SCHEDULE					
	STEEL PLATE BEAM GUARDRAIL TYPE A	TRAFFIC BARRIER TYPE 1 SPECIAL (TANGENT)	TRAFFIC BARRIER TYPE 6	TRAFFIC BARRIER TYPE 6 SPECIAL	TERMINAL MARKER DIRECT APPLIED	GUARDRAIL REFLECTORS
	FOOT	EACH	EACH	EACH	EACH	EACH
RT. STA. 817+95.25 TO RT. STA. 819+53.40	75	1	1		1	
LT. STA. 818+17.57 TO LT. STA. 819+25.72	25	1	1		1	
LT. STA. 820+87.86 TO LT. STA. 821+71.01		1		1	1	
RT. STA. 821+17.33 TO RT. STA. 822+25.48	25	1	1		1	
RT. STA. 817+95.25 TO RT. STA. 822+25.48						6
LT. STA. 818+17.57 TO LT. STA. 821+71.01						5
TOTAL	125	4	3	1	4	11

CURB AND GUTTER TYPE B-6.24 SCHEDULE	
LOCATION	FOOT
CH 70	
LT. STA. 821+81.00 TO LT. STA. 821+88.00	7
WEST GRAHAM ST	
RT. STA. 10+50.00 TO RT. STA. 10+57.34	7
RT. STA. 10+57.34 TO RT. STA. 1087.84	48
LT. STA. 10+50.00 TO LT. STA. 10+92.98	43
LT. STA. 10+92.98 TO LT. STA. 11+22.30	37
TOTAL	142

GUTTER REMOVAL	
LOCATION	FOOT
CH 70	
LT. STA. 820+80.00 TO LT. STA. 821+11.00	31
WEST GRAHAM ST	
LT. STA. 11+19.00 TO LT. STA. 10+50.00	54
RT. STA. 10+97.00 TO RT. STA. 10+50.00	70
TOTAL	155

LOCATION	SEEDING SCHEDULE					
	SEEDING CLASS 2A SPECIAL ACRES	NITROGEN FERTILIZER NUTRIENT 90 LBS/ACRE	PHOSPHORUS FERTILIZER NUTRIENT 90 LBS/ACRE	POTASSIUM FERTILIZER NUTRIENT 90 LBS/ACRE	AGRICULTURAL GROUND LIMESTONE 90 LBS/ACRE	MULCH METHOD 1 90 LBS/ACRE
	ACRES	LBS	LBS	LBS	TONS	TONS
LT STA 817+50 TO LT STA 819+25	0.11	10	10	10	10	0.22
RT STA 817+50 TO RT STA 819+50	0.05	5	5	5	5	0.1
LT STA 820+85 TO LT STA 822+50	0.07	6	6	6	6	0.14
RT STA 821+20 TO RT STA 822+50	0.05	5	5	5	5	0.1
TOTAL	0.28	26*	26*	26*	26*	0.56*

\* INCLUDED IN COST OF SEEDING

EROSION CONTROL BLANKET	
LOCATION	SQ YD
CH 70	
LT. STA. 818+00 TO LT. STA. 819+25	369
RT. STA. 817+50 TO RT. STA. 819+53	219
RT. STA. 821+17 TO RT. STA. 822+50	305
LT. STA. 820+87 TO LT. STA. 819+25	28
TOTAL	921

LOCATION	EARTHWORK SCHEDULE					
	EARTH EXCAVATION CU YD	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE( 25%)	% USED	EARTH EXCAVATION AVAILABLE CU YD	EMBANKMENT CU YD	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) CU YD
MAINLINE C.H. 70						
STA. 817+50 TO STA. 819+37.31	71	53	100.00%	53	404	-351
STA. 821+05.37 TO STA. 822+50	79	59	100.00%	59	282	-223
S.R. WEST GRAHAM	39	29	100.00%	29	10	19
CHANNEL EXCAVATION	220	165	70.00%	116	0	116
TOTAL	409	306		257	696	-440

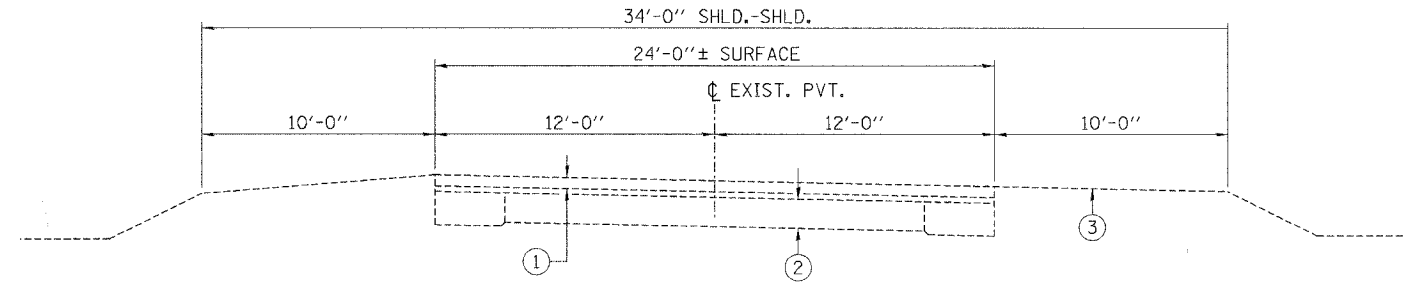
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 DESIGNED: L.F.S. CHECKED: S.W.M. DRAWN: T.W.K.

**SCHEDULE OF QUANTITIES**

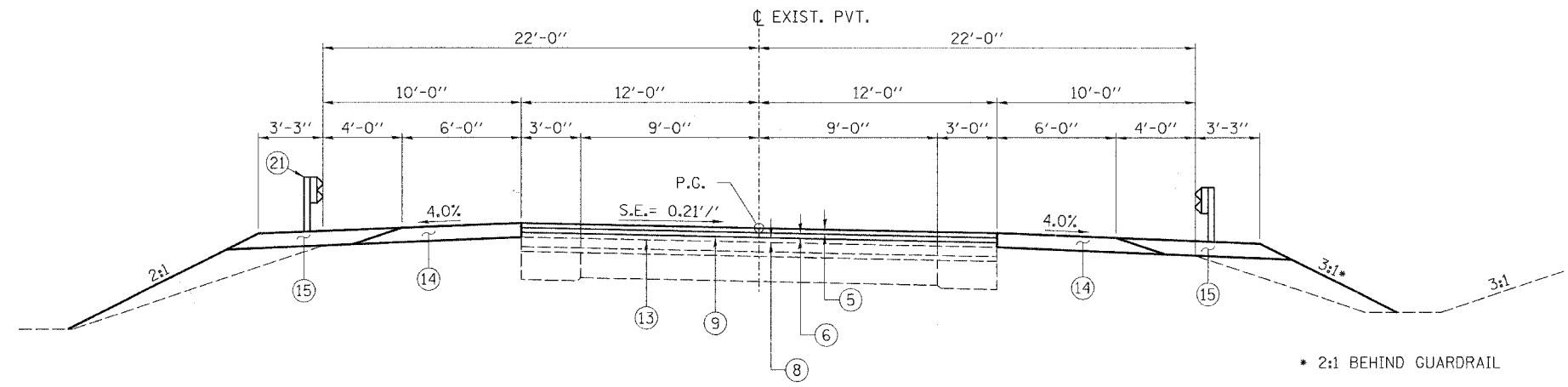
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 McLEAN COUNTY

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
F.A.U. 6385	00-00182-01-BR	McLEAN	33	4
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT: BRN-8027143	

CONTRACT NO. 87269



**EXISTING TYPICAL SECTION**  
STA. 817+50.00 TO STA. 822+50.00

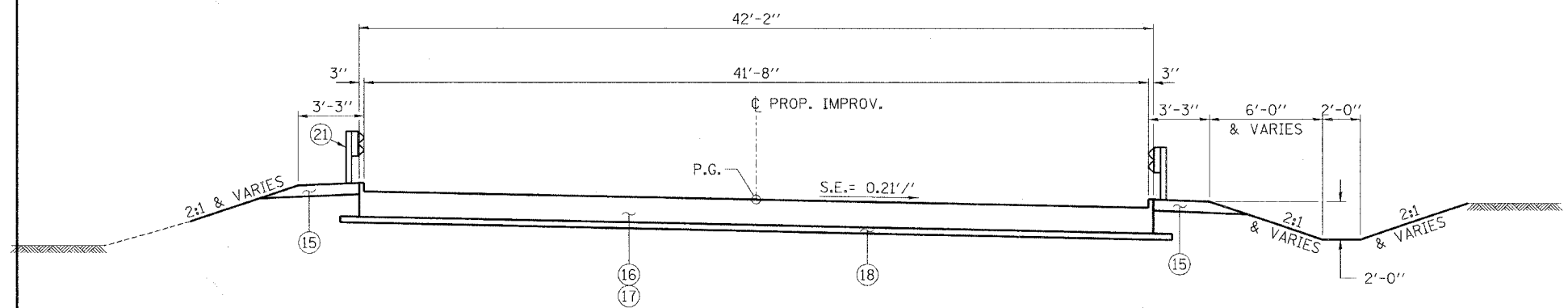


**PROPOSED TYPICAL SECTION**  
STA. 817+50.00 TO STA. 819+01.29  
STA. 821+41.38 TO STA. 822+50.00

- LEGEND**
- ① EXISTING BITUMINOUS PAVEMENT (3"±)
  - ② EXISTING PCC BASE 8"
  - ③ EXISTING SHOULDER
  - ④ EXISTING GUTTER
  - ⑤ BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE MIX D, N50 (1 1/2" THICKNESS MIN.)
  - ⑥ BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE IL 19, N50 (2" THICKNESS)
  - ⑦ BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE IL 19, N50 (2.5" THICKNESS)
  - ⑧ LEVELING BINDER (MACHINE METHOD) 1/2" MINIMUM THICKNESS
  - ⑨ AREA REFLECTIVE CRACK CONTROL TREATMENT, SYSTEM A
  - ⑩ AGGREGATE BASE COURSE, TYPE B 6"
  - ⑪ AGGREGATE BASE COURSE SPECIAL 6"
  - ⑫ BITUMINOUS SURFACE REMOVAL, BUTT-JOINT
  - ⑬ BITUMINOUS MATERIALS (PRIME COAT)
  - ⑭ BITUMINOUS SHOULDERS, SUPERPAVE 8"
  - ⑮ AGGREGATE SHOULDERS 6"
  - ⑯ BRIDGE APPROACH PAVEMENT
  - ⑰ BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)
  - ⑱ SEE STD 420401 FOR SUB-BASE GRANULAR MATERIAL
  - ⑲ INCLUDED IN THE COST OF BRIDGE APPROACH PAVEMENT
  - ⑳ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
  - ㉑ STEEL PLATE BEAM GUARDRAIL
  - ㉒ TRAFFIC BARRIER TERMINAL TYPE 6
  - ㉓ TRAFFIC BARRIER TERMINAL TYPE 6 SPECIAL
  - ㉔ TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL

**NOTES**

- 1) COST OF SAWCUT SHALL BE INCLUDED IN THE UNIT COST BID FOR BITUMINOUS SURFACE REMOVAL.
- 2) CURB IS NOT REQUIRED ALONG THE EAST EDGE OF THE SOUTH BRIDGE APPROACH PAVEMENT SLAB.
- 3) REFLECTIVE CRACK CONTROL TREATMENT SHALL BE APPLIED AFTER LEVELING BINDER



**TYPICAL CROSS SECTION**  
STA. 819+01.29 TO STA. 819+07.27 (FLEXIBLE PVT. CONNECTOR)  
STA. 819+07.27 TO STA. 819+37.30 (BRIDGE APPR. PVT.)  
STA. 821+05.38 TO STA. 82+35.35 (BRIDGE APPR. PVT.)  
STA. 821+35.35 TO STA. 821+41.38 (FLEXIBLE PVT. CONNECTOR)

SUGGESTED FILL SECTION  
CONSTRUCT AS SHOWN IN  
STATION CROSS SECTIONS

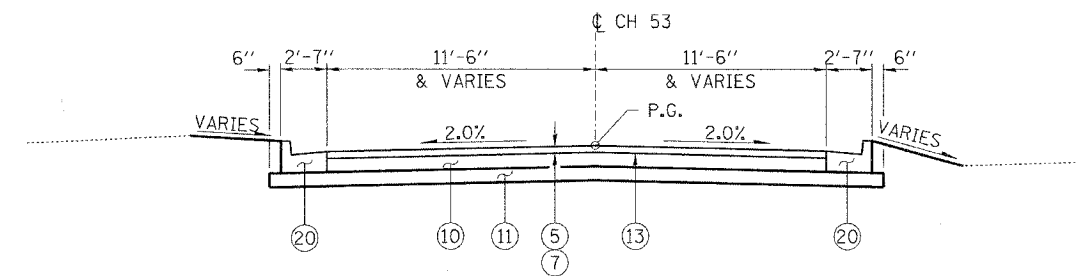
SUGGESTED CUT SECTION  
CONSTRUCT AS SHOWN IN  
STATION CROSS SECTIONS

**HLR**  
Rice, Berry and Associates  
A Division of Hampton,  
Lenzini and Renwick, Inc.  
Civil & Structural Engineers  
3085 Stevenson Drive  
Suite 201  
Springfield, Illinois 62703  
217-546-3400  
P.O. Box 1036  
DuQuoin, Illinois 62832  
618-790-4637  
Account Number  
12-59-0033-1  
Date: 11/15/05  
DESIGNED: L.F.S. CHECKED: S.W.M. DRAWN: D.B.

**TYPICAL CROSS SECTIONS**  
SECTION 00-00182-01-BR  
F.A.U. 6385 / C.H. 70  
McLEAN COUNTY

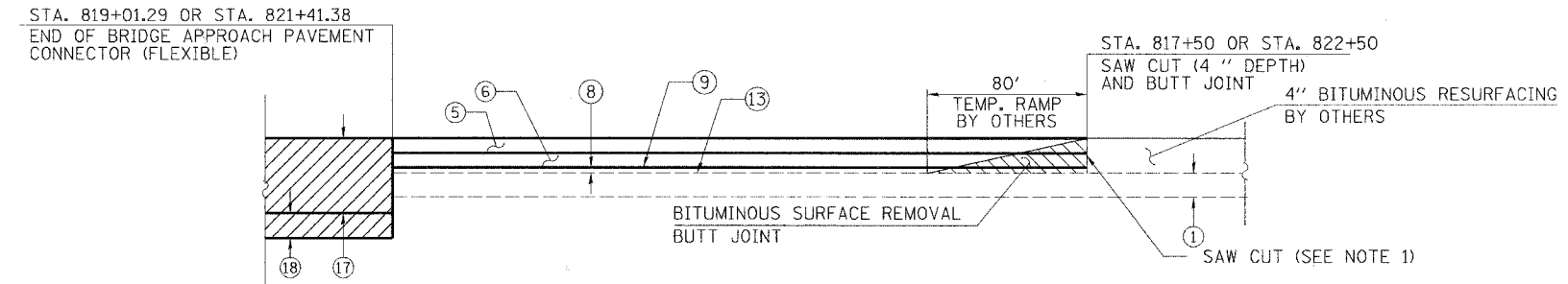
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
F.A.U. 6385	00-00182 -01-BR	McLEAN	33	5
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-NR-822743	

CONTRACT NO. 87269



**PROPOSED TYPICAL SECTION**  
WEST GRAHAM ST.  
STA. 10+50.00 TO STA. 11+15.58

- LEGEND**
- ① EXISTING BITUMINOUS PAVEMENT (3"±)
  - ② EXISTING PCC BASE 8"
  - ③ EXISTING SHOULDER
  - ④ EXISTING GUTTER
  - ⑤ BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE MIX D, N50 (1½" THICKNESS MIN.)
  - ⑥ BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE IL 19, N50 (2" THICKNESS)
  - ⑦ BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE IL 19, N50 (2.5" THICKNESS)
  - ⑧ LEVELING BINDER (MACHINE METHOD) ½" MINIMUM THICKNESS
  - ⑨ AREA REFLECTIVE CRACK CONTROL TREATMENT, SYSTEM A
  - ⑩ AGGREGATE BASE COURSE, TYPE B 6"
  - ⑪ AGGREGATE BASE COURSE SPECIAL 6"
  - ⑫ BITUMINOUS SURFACE REMOVAL, BUTT-JOINT
  - ⑬ BITUMINOUS MATERIALS (PRIME COAT)
  - ⑭ BITUMINOUS SHOULDERS, SUPERPAVE 8"
  - ⑮ AGGREGATE SHOULDERS 6"
  - ⑯ BRIDGE APPROACH PAVEMENT
  - ⑰ BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)
  - ⑱ SEE STD 420401 FOR SUB-BASE GRANULAR MATERIAL
  - ⑲ INCLUDED IN THE COST OF BRIDGE APPROACH PAVEMENT
  - ⑳ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
  - ㉑ STEEL PLATE BEAM GUARDRAIL
  - ㉒ TRAFFIC BARRIER TERMINAL TYPE 6
  - ㉓ TRAFFIC BARRIER TERMINAL TYPE 6 SPECIAL
  - ㉔ TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL

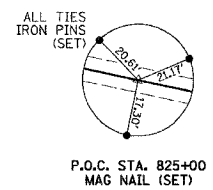
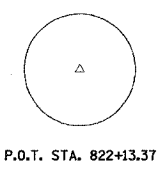
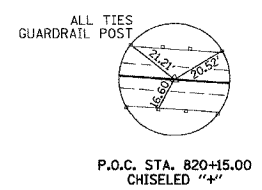
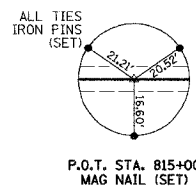


**PAVEMENT TRANSITION DETAIL**

- NOTES**
- 1) COST OF SAWCUT SHALL BE INCLUDED IN THE UNIT COST BID FOR BITUMINOUS SURFACE REMOVAL.
  - 2) CURB IS NOT REQUIRED ALONG THE EAST EDGE OF THE SOUTH BRIDGE APPROACH PAVEMENT SLAB.
  - 3) REFLECTIVE CRACK CONTROL TREATMENT SHALL BE APPLIED AFTER LEVELING BINDER

**HLR**  
Rice, Berry and Associates  
A Division of Hampton,  
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Civil & Structural Engineers  
3085 Stevenson Drive  
Suite 201  
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217-546-3400  
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618-790-4637  
Date: 11/15/05  
DESIGNED: L.F.S. | CHECKED: S.W.M. | DRAWN: D.B.

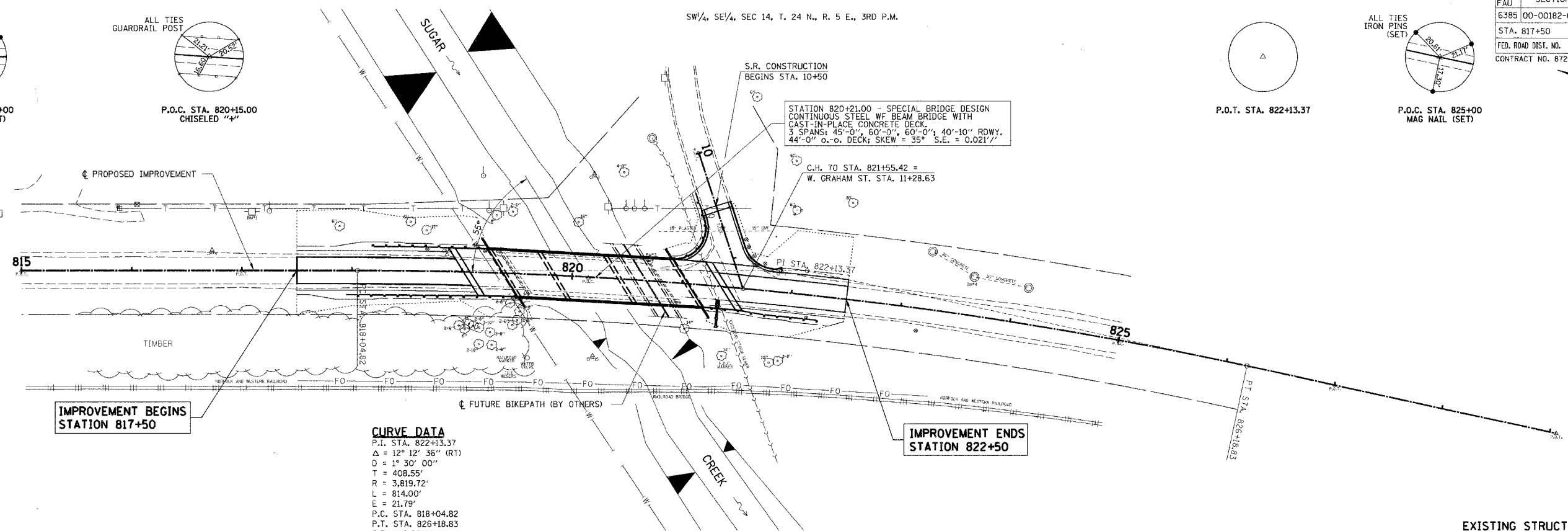
**TYPICAL CROSS SECTIONS**  
  
**SECTION 00-00182-01-BR**  
**F.A.U. 6385 / C.H. 70**  
**McLEAN COUNTY**



FAU	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6385	00-00182-01-BR	McLEAN	33	6
STA. 817+50		TO STA. 822+50		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT-BRM-5227(43)				
CONTRACT NO. 67269				

SW 1/4, SE 1/4, SEC 14, T. 24 N., R. 5 E., 3RD P.M.

SW 1/4, SE 1/4, SEC 14, T. 24 N., R. 5 E., 3RD P.M.



IMPROVEMENT BEGINS STATION 817+50

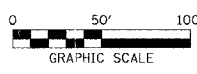
IMPROVEMENT ENDS STATION 822+50

**CURVE DATA**

P.T. STA. 822+13.37  
 $\Delta = 12^\circ 12' 36''$  (RT)  
 $D = 1^\circ 30' 00''$   
 $T = 408.55'$   
 $R = 3,819.72'$   
 $L = 814.00'$   
 $E = 21.79'$   
 P.C. STA. 818+04.82  
 P.T. STA. 826+18.83  
 $S.E. = 0.0217'$   
 S.E. TRANSITION  
 STA. 816+50.72 TO STA. 818+80.72  
 STA. 825+42.93 TO STA. 827+72.93

STATION 820+21.00 - SPECIAL BRIDGE DESIGN CONTINUOUS STEEL WF BEAM BRIDGE WITH CAST-IN-PLACE CONCRETE DECK. 3 SPANS: 45'-0", 60'-0", 60'-0", 40'-10" RDWY. 44'-0" o.-o. DECK, SKEW = 35° S.E. = 0.0217'

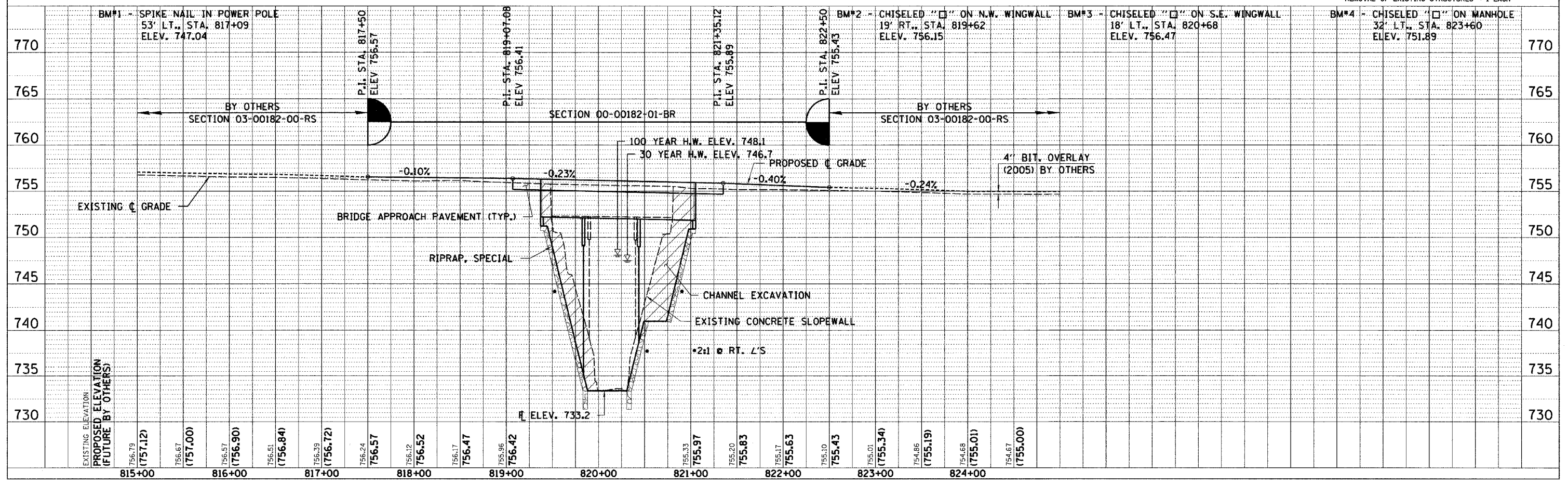
C.H. 70 STA. 821+55.42 = W. GRAHAM ST. STA. 11+28.63



**EXISTING STRUCTURE NO. 057-0074**  
 STATION 820+15 - THREE SPAN STEEL I BEAM BRIDGE WITH POURED IN PLACE CONCRETE DECK & WINGWALLS ON CLOSED CONCRETE ABUTMENTS & PIERS ON CONC. PILES. 132.80' FC-FC, ABUTS: 36.50' o.-o. DECK. REMOVAL OF EXISTING STRUCTURES = 1 EACH

DATE	BY
11/15/2005	...

DATE	BY
11/15/2005	...



BM#1 - SPIKE NAIL IN POWER POLE 53' LT., STA. 817+09 ELEV. 747.04

P.I. STA. 817+50 ELEV. 756.57

P.I. STA. 819+07.08 ELEV. 756.41

P.I. STA. 821+35.12 ELEV. 755.89

P.I. STA. 822+50 ELEV. 755.43

BM#2 - CHISELED "□" ON N.W. WINGWALL 19' RT., STA. 819+62 ELEV. 756.15

BM#3 - CHISELED "□" ON S.E. WINGWALL 18' LT., STA. 820+68 ELEV. 756.47

BM#4 - CHISELED "□" ON MANHOLE 32' LT., STA. 823+60 ELEV. 751.89

BY OTHERS SECTION 03-00182-00-RS

SECTION 00-00182-01-BR

BY OTHERS SECTION 03-00182-00-RS

100 YEAR H.W. ELEV. 748.1  
 30 YEAR H.W. ELEV. 746.7

PROPOSED C GRADE

4" BIT. OVERLAY (2005) BY OTHERS

BRIDGE APPROACH PAVEMENT (TYP.)

RIPRAP, SPECIAL

CHANNEL EXCAVATION

EXISTING CONCRETE SLOPEWALL

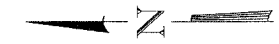
2:1 @ RT. L'S

ELEV. 733.2

STATION	ELEVATION
815+00	756.79 (757.12)
	756.67 (757.00)
816+00	756.57 (756.90)
	756.51 (756.84)
817+00	756.39 (756.72)
	756.24
818+00	756.12
	756.52
	756.17
	756.47
819+00	755.95
	756.42
820+00	
	755.33
	755.97
	755.20
	755.83
	755.17
	755.63
821+00	
	755.10
	755.43
	755.01
	755.34
	754.86
	755.19
822+00	
	754.68
	755.01
823+00	
	754.67
	755.00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 6385	00-00182-01-BR	McLEAN	33	7
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT: 894-027-143		

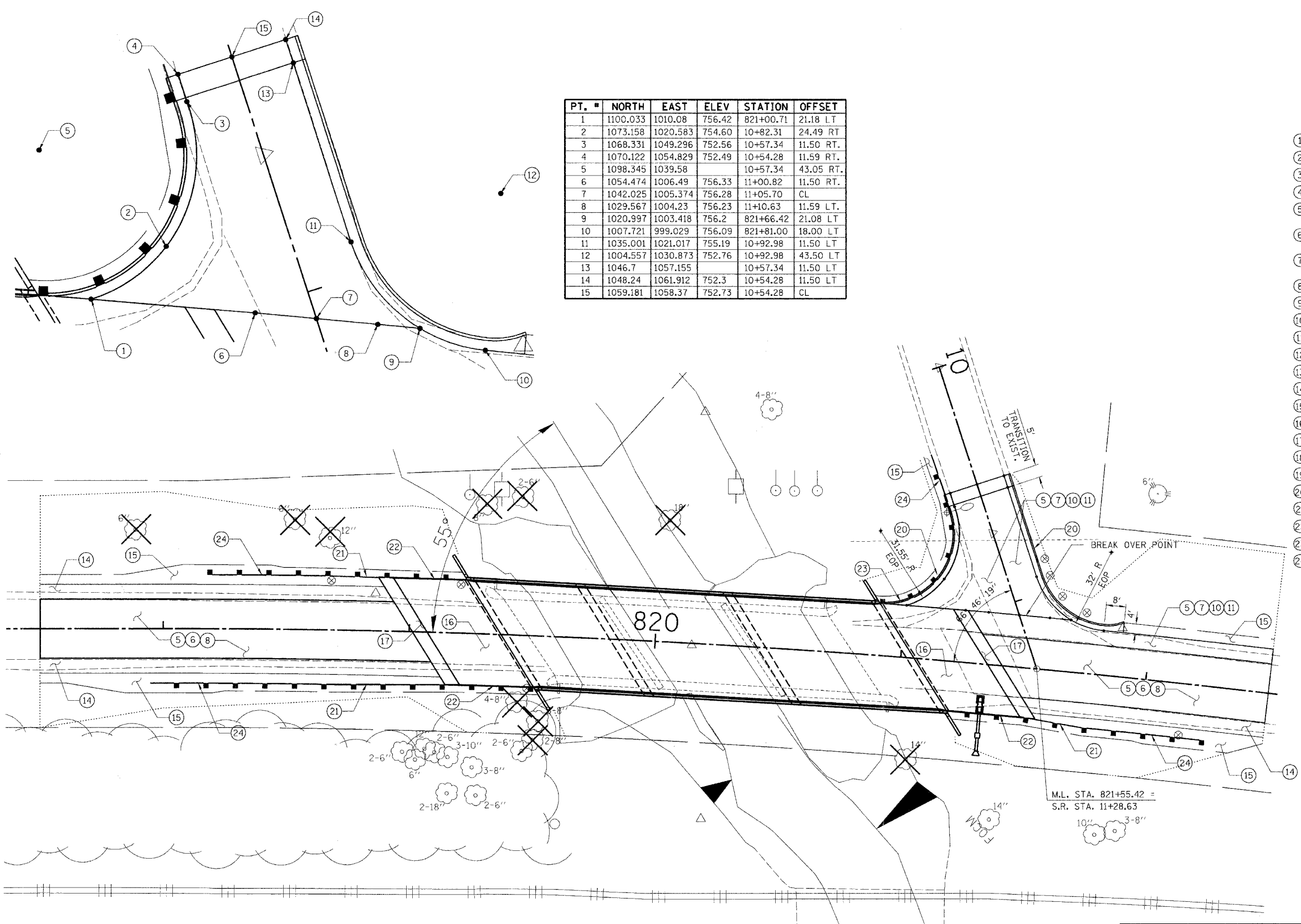
CONTRACT NO. 87269



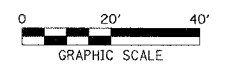
PT. #	NORTH	EAST	ELEV	STATION	OFFSET
1	1100.033	1010.08	756.42	821+00.71	21.18 LT
2	1073.158	1020.583	754.60	10+82.31	24.49 RT
3	1068.331	1049.296	752.56	10+57.34	11.50 RT.
4	1070.122	1054.829	752.49	10+54.28	11.59 RT.
5	1098.345	1039.58		10+57.34	43.05 RT.
6	1054.474	1006.49	756.33	11+00.82	11.50 RT.
7	1042.025	1005.374	756.28	11+05.70	CL
8	1029.567	1004.23	756.23	11+10.63	11.59 LT.
9	1020.997	1003.418	756.2	821+66.42	21.08 LT
10	1007.721	999.029	756.09	821+81.00	18.00 LT
11	1035.001	1021.017	755.19	10+92.98	11.50 LT
12	1004.557	1030.873	752.76	10+92.98	43.50 LT
13	1046.7	1057.155		10+57.34	11.50 LT
14	1048.24	1061.912	752.3	10+54.28	11.50 LT
15	1059.181	1058.37	752.73	10+54.28	CL

**LEGEND**

- ① EXISTING BITUMINOUS PAVEMENT (3"±)
- ② EXISTING PCC BASE 8"
- ③ EXISTING SHOULDER
- ④ EXISTING GUTTER
- ⑤ BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE MIX D, N50 (1 1/2" THICKNESS MIN.)
- ⑥ BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE IL 19, N50 (2" THICKNESS)
- ⑦ BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE IL 19, N50 (2.5" THICKNESS)
- ⑧ LEVELING BINDER (MACHINE METHOD) 1/2" MINIMUM THICKNESS
- ⑨ AREA REFLECTIVE CRACK CONTROL TREATMENT, SYSTEM A
- ⑩ AGGREGATE BASE COURSE, TYPE B 6"
- ⑪ AGGREGATE BASE COURSE SPECIAL 6"
- ⑫ BITUMINOUS SURFACE REMOVAL, BUTT-JOINT
- ⑬ BITUMINOUS MATERIALS (PRIME COAT)
- ⑭ BITUMINOUS SHOULDERS, SUPERPAVE 8"
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- ⑰ BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)
- ⑱ SEE STD 420401 FOR SUB-BASE GRANULAR MATERIAL
- ⑲ INCLUDED IN THE COST OF BRIDGE APPROACH PAVEMENT
- ⑳ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
- ㉑ STEEL PLATE BEAM GUARDRAIL
- ㉒ TRAFFIC BARRIER TERMINAL TYPE 6
- ㉓ TRAFFIC BARRIER TERMINAL TYPE 6 SPECIAL
- ㉔ TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL



M.L. STA. 821+55.42 =  
S.R. STA. 11+28.63



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 A Division of Hampton,  
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 Civil & Structural Engineers  
 3085 Stevenson Drive  
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 Springfield, Illinois 62703  
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 Account Number  
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 P.O. Box 1036  
 DuQuoin, Illinois 62832  
 618-790-4637  
 DESIGNED: L.F.S. | CHECKED: S.W.M. | DRAWN: T.W.K.

**INTERSECTION DETAIL**  
 SECTION 00-00182-01-BR  
 F.A.U. 6385 / C.H. 70  
 McLEAN COUNTY

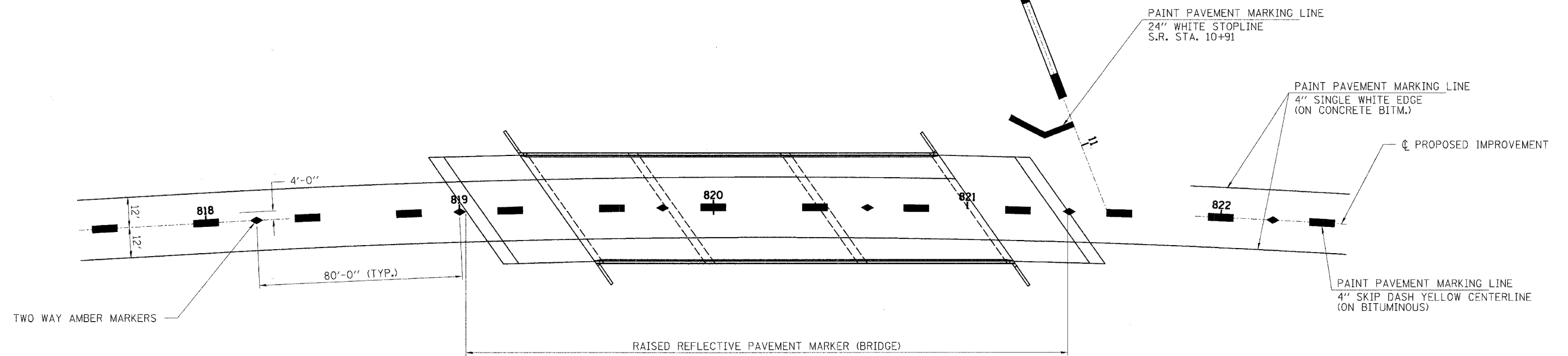


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 6385	00-00182-01-BR	MCLEAN	33	8
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-NUM-822743		

CONTRACT NO. 87269

**GENERAL NOTES**

SEE STANDARDS 780001 AND 781001 IDOT TYPICAL PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS.



LOCATION	PAVEMENT MARKING SCHEDULE						RAISED REFLECTIVE PAVEMENT MARKERS	
	PERMAMENT			TEMPORARY			ROADWAY	BRIDGE
	4" SINGLE WHITE EDGE LINE	4" SKIPED DASHED YELLOW CENTERLINE	24" WHITE STOP LINE	4" SINGLE WHITE EDGE LINE	4" SKIPED DASHED YELLOW CENTERLINE	24" WHITE STOP LINE	80' CNTS	80' CNTS
	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	EACH	EACH
C.H. TO WHITE OAK DRIVE								
CL STA. 817+50.00 TO CL STA. 819+01.08		38			38			
RT. STA. 817+50.00 TO RT. STA. 819+20.25	170			170				
LT. STA. 817+50.00 TO LT. STA. 818+92.57	143			143				
CL STA. 819+01.08 TO CL STA. 821+35.33								
RT. STA. 819+20.25 TO RT. STA. 821+50.48								
LT. STA. 818+92.57 TO LT. STA. 820+89.88								
CL STA. 821+35.33 TO CL STA. 822+50.00		29			29			
RT. STA. 821+50.48 TO RT. STA. 822+50.00	100			100				
LT. STA. 821+80.00 TO LT. STA. 822+50.00	70			70				
CL STA. 817+50.00 TO CL STA. 822+50.00							3	
CL STA. 817+50.00 TO CL STA. 819+01.08								3
CL STA. 819+01.08 TO CL STA. 821+35.33								
CL STA. 821+35.33 TO CL STA. 822+50.00							3	
WEST GRAHAM STREET		13	23		13	23		
TOTAL	483*	80*	23*	483*	80*	23*	6*	3*

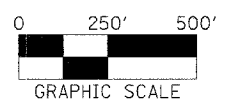
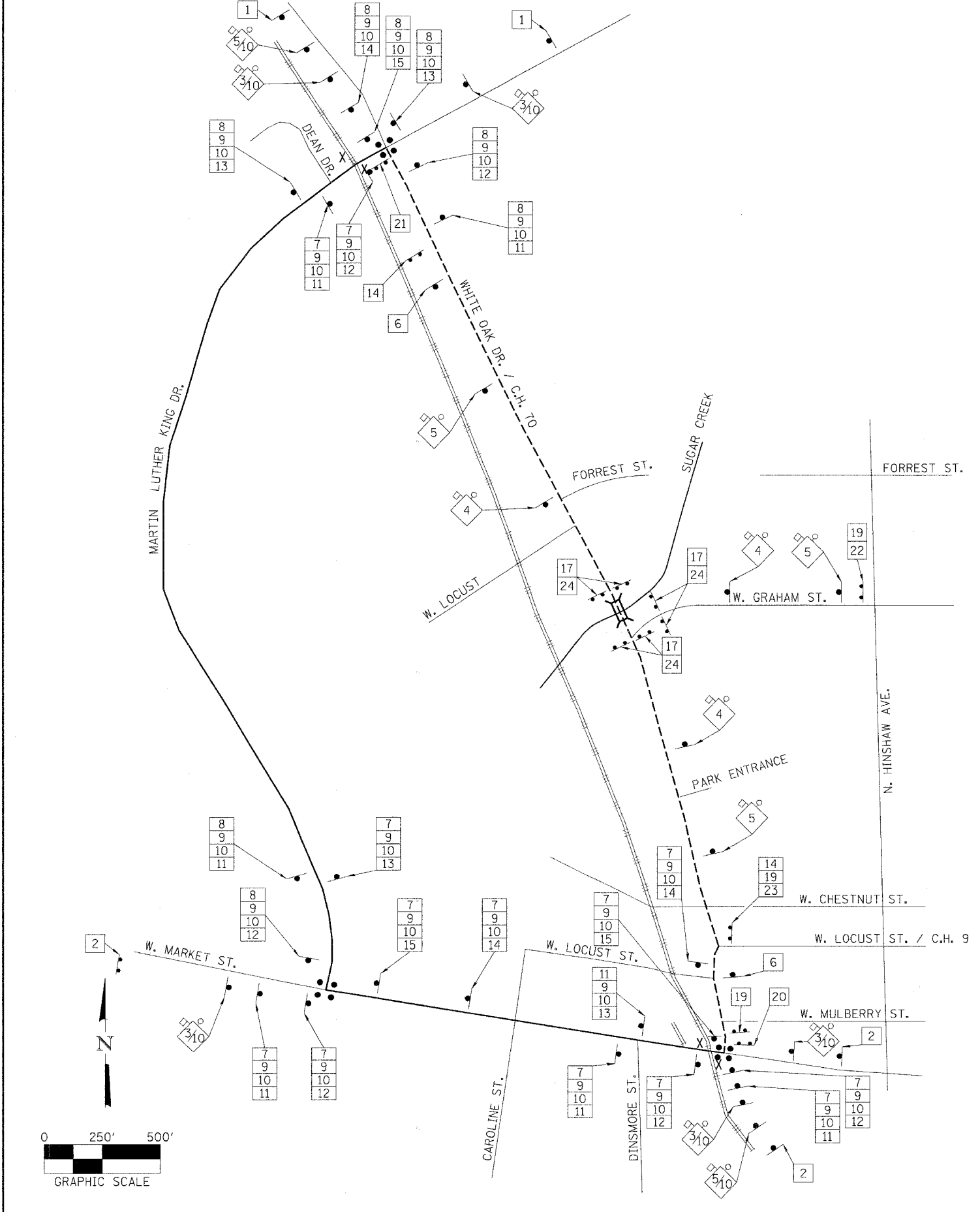
\*-TO BE COMPLETED BY OTHERS

FOR INFORMATION ONLY - TO BE COMPLETED BY OTHERS.

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**STRIPING PLAN**  
 F.A.U. 6385 / C.H. 70  
 SECTION 00-00182-01-BR  
 MCLEAN COUNTY





**SIGN LEGEND**

1	WHITE OAK DRIVE SOUTH CLOSED TO TRAFFIC USE MARTIN LUTHER KING DRIVE/ WEST MARKET STREET	R11-3, 60" x 30" WITH 2 AMBER FLASHING LIGHTS. (5 REQ'D)	11		M5-1 L, 21" x 15" (4 REQ'D)
2	WHITE OAK DRIVE NORTH CLOSED TO TRAFFIC USE MARTIN LUTHER KING DRIVE/ WEST MARKET STREET	R11-3, 60" x 30" WITH 2 AMBER FLASHING LIGHTS. (5 REQ'D)	12		M6-1, 21" x 15" (6 REQ'D)
3		W20-2, 48" x 48" WITH AMBER FLASHING LIGHT AND FLAG. (10 REQ'D)	13		M6-3, 21" x 15" (17 REQ'D)
4		W20, 48" x 48" WITH AMBER FLASHING LIGHT AND FLAG. (2 REQ'D)	14		M5-1 R, 21" x 15" (4 REQ'D)
5		W20-3, 48" x 48" WITH AMBER FLASHING LIGHT AND FLAG. (4 REQ'D)	15		M6-1, 21" x 15" (7 REQ'D)
6		W20-3, 48" x 48" WITH AMBER FLASHING LIGHT AND FLAG. (2 REQ'D)	16		M4-8A, 24" x 48" (2 REQ'D)
7		M3-2, 24" x 12" (20 REQ'D)	17		R11-2, 48" x 30" (4 REQ'D)
8		M3-4, 24" x 12" (20 REQ'D)	18		R11-3, 60" x 30" (1 REQ'D)
9		M4-8, 24" x 12" (40 REQ'D)	19		R11-4, 60" x 30" (2 REQ'D)
10		M1-I100, 24" x 12" (52 REQ'D)	20		R11-3, 60" x 30" (1 REQ'D)
			21		R11-3, 60" x 30" (1 REQ'D)
			22		M4-10R, 48" x 18" (1 REQ'D)
			23		M4-10R, 48" x 18" (1 REQ'D)
			24		TYPE III BARRICADES WITH TWO FLASHING LIGHTS EACH.

**LEGEND**

- RAILROAD CROSSING WITH FLASHING LIGHTS AND GATES
- DETOUR ROUTE
- ROAD OPEN TO LOCAL TRAFFIC ONLY
- SIGNALIZED INTERSECTION
- 48" x 48" CONSTRUCTION SIGN, WITH AMBER FLASHING LIGHT AND ORANGE WARNING FLAG (OPTIONAL) NUMBER DENOTES SIGN TYPE
- M4-9 SERIES DETOUR SIGN WITH DIRECTION AND ROAD NAME PLATES NUMBER DENOTES TYPE
- OTHER DETOUR SIGNS, NUMBER DENOTES TYPE

ROUTE NO.	SECTION	COUNTY	STATION	SHEET
F.A.U. 6385	00-00182-01-BR	McLEAN	33	9
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-SPM-5227143	

CONTRACT NO. 87269

**ILR**  
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Date: 11/15/05  
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**DETOUR PLAN**  
F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK  
SECTION 00-00182-01-BR  
McLEAN COUNTY  
STRUCTURE 057-5306 / STATION 820+21

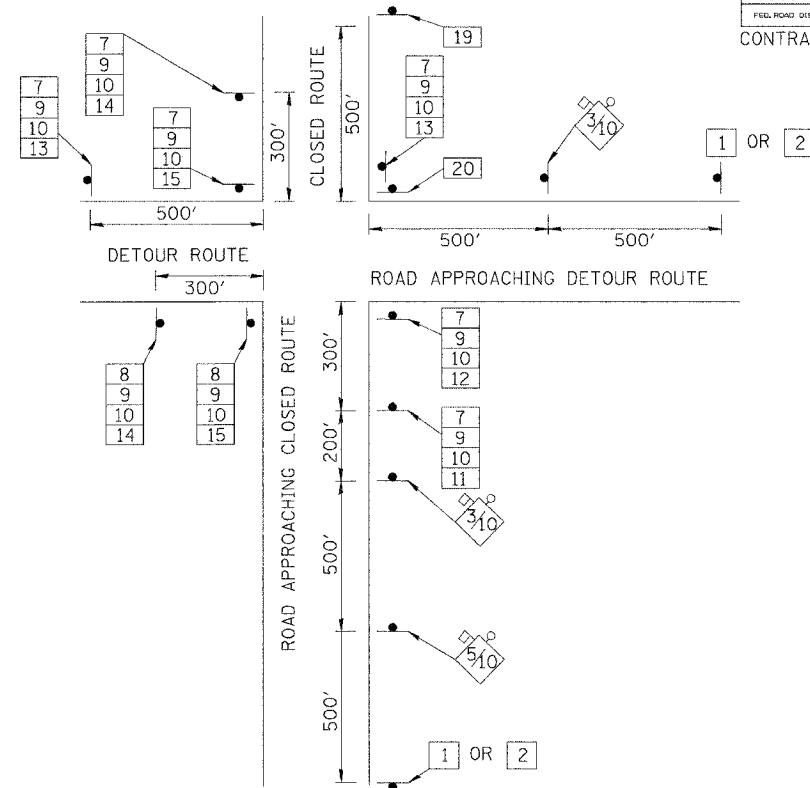
## DETOUR GENERAL NOTES

1. ALL SIGNING SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JAN. 1, 2002", THE LATEST EDITION OF THE "THE QUALITY STANDARD FOR WORK ZONE TRAFFIC CONTROL DEVICES, THE DETAILS IN THESE PLANS, AND THE LATEST EDITION OF THE STATE OF ILLINOIS "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".
2. THE CONTRACTOR SHALL SCHEDULE ALL WORK IN AN EXPEDIENT MANNER TO REDUCE THE LENGTH OF TIME THAT THE DETOUR NEEDS TO BE IN EFFECT.
3. THE ENGINEER SHALL BE NOTIFIED IN WRITING AT LEAST THREE WEEKS PRIOR TO THE DAY THE DETOUR IS TO BE IN EFFECT. THE ENGINEER WILL CONTACT THE APPROPRIATE LOCAL AGENCIES INCLUDING LAW ENFORCEMENT, EMERGENCY SERVICES, SCHOOLS AND INTERESTED PARTIES FOR APPROVAL OF SUCH DATE.
4. IF DEEMED NECESSARY BY THE ENGINEER A PRE-CONSTRUCTION MEETING WITH THE CONTRACTOR SHALL BE HELD AT LEAST TWO WEEKS PRIOR TO THE DAY THE DETOUR IS TO BE IN EFFECT.
5. THE CONTRACTOR SHALL SUPPLY TO THE ENGINEER THE NAMES AND TELEPHONE NUMBERS OF HIS REPRESENTATIVES ON THE CONSTRUCTION SITE AND HIS REPRESENTATIVE RESPONSIBLE FOR THE DETOUR SIGNING PRIOR TO THE START OF THE WORK. THE McLEAN COUNTY HIGHWAY DEPARTMENT REPRESENTATIVE FOR THE DETOUR IS:  
  

MR. JOHN E. MITCHELL  
 McLEAN COUNTY HIGHWAY DEPARTMENT  
 102 TOWANDA-BARNES ROAD  
 BLOOMINGTON, ILLINOIS 61704  
 (309) 663-9445
6. IF REQUESTED BY THE CONTRACTOR IN WRITING AT LEAST THREE WEEKS PRIOR TO THE DAY THE DETOUR IS TO BE IN EFFECT THE ENGINEER WILL FIELD LOCATE THE POSITIONS OF ANY SIGNS.
7. LONGITUDINAL DIMENSIONS SHOWN ON THESE PLANS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
8. THE ROAD SHALL NOT BE CLOSED UNTIL ALL SIGNING IS ERECTED IN ACCORDANCE WITH THE DETOUR PLAN AND INSPECTED AND APPROVED BY THE ENGINEER.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL BARRICADES, SIGNS, LIGHTS, AND OTHER DEVICES INSTALLED BY HIM ARE IN PLACE AND OPERATING 24 HOURS EACH DAY INCLUDING SUNDAYS AND HOLIDAYS DURING THE TIME THE DETOUR IS IN EFFECT.
10. THE CONTRACTOR SHALL MAKE ALL CHANGES IN SIGNING THAT ARE DEEMED NECESSARY BY THE ENGINEER.
11. ALL EXISTING SIGNING THAT IS NOT APPLICABLE WHILE THE DETOUR IS IN EFFECT SHALL BE COMPLETELY COVERED BY THE CONTRACTOR, IN A MANNER APPROVED BY THE ENGINEER.
12. ALL DETOUR SIGNING SHALL BE POST MOUNTED IF THE ROAD CLOSURE IS TO EXCEED FOUR (4) CALENDAR DAYS.
13. ALL DETOUR SIGNING EXCEPT REGULATORY SIGNS SHALL HAVE BLACK LEGENDS ON FLUORESCENT ORANGE SHEETING AND STANDARD BLACK BORDERS. THE FLUORESCENT ORANGE REFLECTIVE SHEETING SHALL MEET THE REQUIREMENTS OF ARTICLE 1084.02 OF THE STANDARD SPECIFICATIONS. ALL DETOUR SIGNING SHALL BE NEW OR LIKE NEW CONDITION. THE ENGINEER SHALL BE THE SOLE JUDGE OF THE CONDITION AND ACCEPTANCE OF THE SIGNS.
14. THE SIZES OF ALL SIGNS NOT SPECIFIED IN THESE PLANS SHALL BE AS REQUIRED BY THE ILLINOIS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
15. AS A MINIMUM, ALL AMBER FLASHING LIGHTS THAT ARE REQUIRED FOR THIS DETOUR SHALL MEET THE REQUIREMENTS FOR TYPE A-LOW INTENSITY FLASHING LIGHTS IN ARTICLE 1084.01 OF THE STANDARD SPECIFICATIONS. ALL LIGHTS SHALL OPERATE DURING THE HOURS OF DARKNESS. ONLY LIGHTS THAT HAVE BEEN APPROVED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION SHALL BE USED.
16. THE MINIMUM DIMENSIONS OF THE ORANGE WARNING FLAGS SHOWN IN THE PLANS ARE 18" BY 18".
17. ALL BARRICADES SHALL HAVE REFLECTORIZED STRIPING ON BOTH SIDES OF THE BARRICADES. THE TYPE III BARRICADES USED AT THE POINT OF CLOSURE TO THRU TRAFFIC SHALL NOT EXCEED 8'-0" IN WIDTH EACH, FOR A SINGLE APPROACH LANE.
18. THE "ROAD CLOSED" (R11-2), THE "ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY" (R11-3), AND THE "ROAD CLOSED TO THRU TRAFFIC" (R11-4) SIGNS SHALL BE MOUNTED ABOVE THE TOP OF THE BARRICADE. ALL TYPE III BARRICADES SHALL HAVE TWO (2) AMBER TYPE A-LOW INTENSITY FLASHING LIGHTS SPACED NEAR THE CENTERLINE OF THE SUPPORTS.
19. THE ROAD NAME SIGN SHALL HAVE A BLACK LEGEND ON FLUORESCENT ORANGE REFLECTIVE SHEETING. THE SIGN BLANK SHALL BE A 9" BY VARIABLE OR A 12" BY VARIABLE WITH DESIGN SERIES C LETTERS. THE CAPITAL LETTERS SHALL BE 6" WITH 5" LOWER CASE.
20. DURING NON-WORKING HOURS AT THE POINT OF ROAD CLOSURE TO ALL TRAFFIC THE CONTRACTOR SHALL PROVIDE A MEANS TO RESTRAIN THE BARRICADES FROM EASY MOVEMENT BY VANDALS. THE CHOSEN METHOD SHALL BE APPROVED BY THE ENGINEER.
21. CONSTRUCTION EQUIPMENT SHALL NOT BE PARKED IMMEDIATELY BEHIND THE TYPE III BARRICADES DURING NON-WORKING HOURS. IN ANY EVENT ARTICLE 701.04 OF THE STANDARD SPECIFICATIONS SHALL APPLY.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE VISIBILITY OF ALL DETOUR AND CONSTRUCTION SIGNING, INCLUDING BRUSHING BACK VEGETATION IF DEEMED NECESSARY BY THE ENGINEER.
23. THE FOLLOWING ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD IS APPLICABLE FOR THIS WORK: STANDARD 702001 & 701101
24. THE ENGINEER SHALL BE NOTIFIED AT LEAST TWENTY FOUR (24) HOURS BEFORE THE ROAD IS TO BE OPENED TO TRAFFIC. THE ENGINEER WILL CONTACT THE APPROPRIATE LOCAL AGENCIES AND INTERESTED PARTIES.
25. THE PENALTY FOR EXCEEDING THE TIME LIMIT, AS STATED IN DETOUR GENERAL NOTE TWO OF THESE PLANS, SHALL EQUAL THE CHARGE OF TRAFFIC CONTROL DEFICIENCY OF \$1,000 PER DAY, FOR EVERY HOUR THE DETOUR AND ROAD CLOSURE EXCEEDS THE TIME LIMIT SET IN DETOUR GENERAL NOTE TWO. THIS PENALTY CAN BE ASSESSED IN ADDITION TO THE PENALTY SPECIFIED IN THE SPECIAL PROVISIONS FOR TRAFFIC CONTROL AND PROTECTION AND BOTH PENALTIES CAN BE CHARGED CONCURRENTLY.

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
F.A.U. 6385	00-00182-01-BR	McLEAN	33	10
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-BRN-522743	

CONTRACT NO. 87269



**TYPICAL INTERSECTION AT POINT OF DETOUR**

### SPECIAL DETOUR NOTES

1. THE CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO THE DETOUR GENERAL NOTES,
2. SEE DETAIL PLAN SHEET FOR INFORMATION ON THE DESIGN AND LOCATION OF THE DETOUR INFORMATION SIGNS.
3. FOUR (4) TYPE III BARRICADES WILL BE NEEDED FOR THIS DETOUR AND ROAD CLOSURE.
4. THE TOTAL LENGTH OF THE DETOUR IS 1.12 MILES.
5. ALL DETOUR SIGNS, SHALL BE COMPLETELY COVERED AT ALL TIMES THE ROADWAY IS NOT CLOSED TO TRAFFIC.

Rice, Berry and Associates  
 A Division of Hampton,  
 Lenzini and Renwick, Inc.  
 Civil & Structural Engineers  
 3085 Stevenson Drive  
 Suite 201  
 Springfield, Illinois 62703  
 217-546-3400  
 P.O. Box 1036  
 DuQuoin, Illinois 62832  
 618-790-4637

Account Number: 12-59-0033-1  
 Date: 1/15/05  
 DESIGNED: L.F.S. | CHECKED: S.W.M. | DRAWN: D.B.

DETOUR GENERAL NOTES

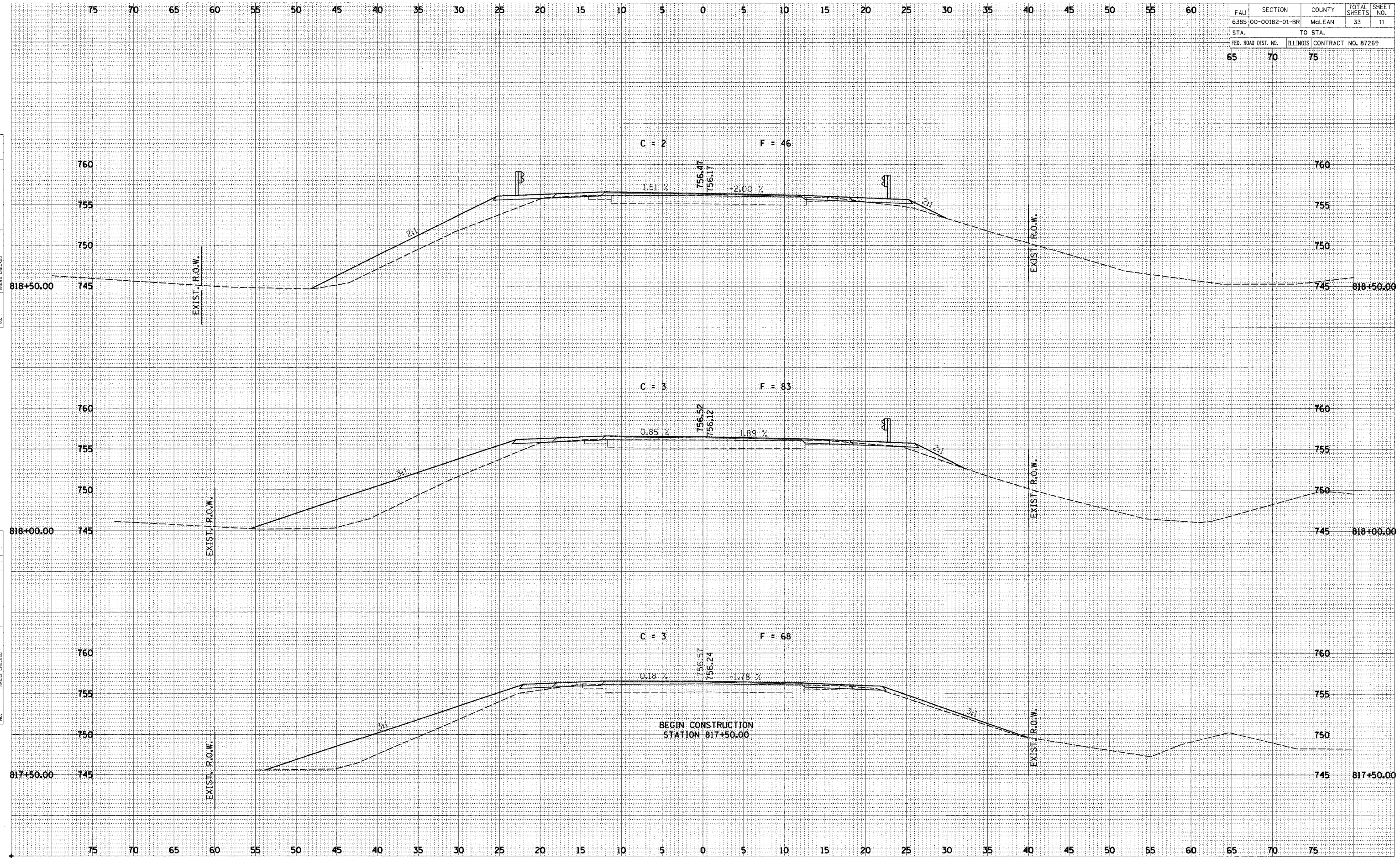
F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK

SECTION 00-00182-01-BR

McLEAN COUNTY

STRUCTURE 057-5306 / STATION 820+21

FAJ	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6385	00-00182-01-BR	MCLEAN	33	11
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 87269		
65	70	75		



FINAL SURVEY  
 SURVEYED  
 PLOTTED  
 TEMPLATE  
 NOTE BOOK  
 NO.

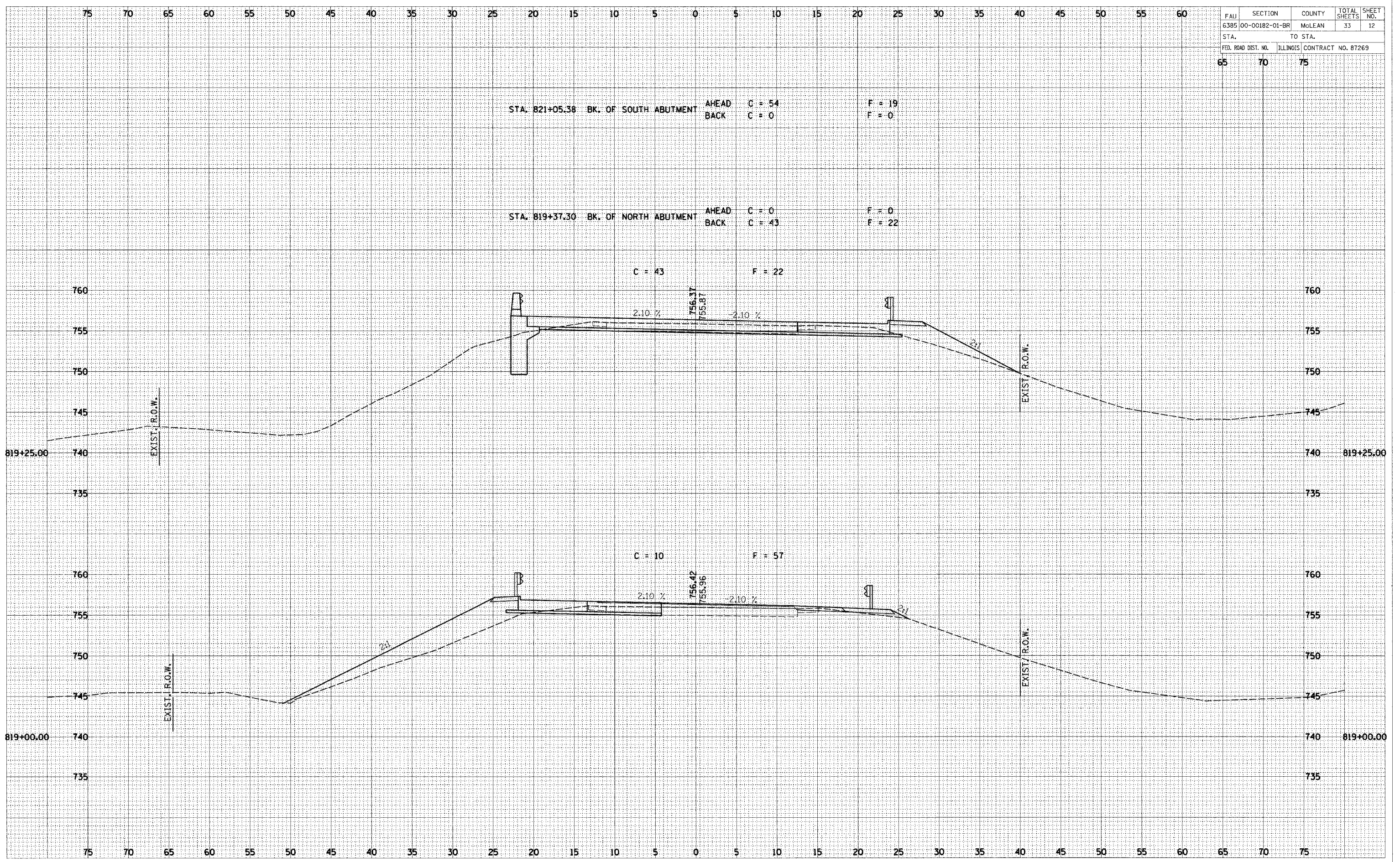
ORIGINAL SURVEY  
 SURVEYED  
 PLOTTED  
 TEMPLATE  
 NOTE BOOK  
 NO.



FALL	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6385	00-00182-01-BR	MCLEAN	33	12
STA.		TO STA.		
65		75		
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 87269		

DATE \_\_\_\_\_  
 BY \_\_\_\_\_  
 SUBMITTED \_\_\_\_\_  
 SURVEY \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 NO. \_\_\_\_\_

DATE \_\_\_\_\_  
 BY \_\_\_\_\_  
 SUBMITTED \_\_\_\_\_  
 ORIGINAL SURVEY \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 NO. \_\_\_\_\_

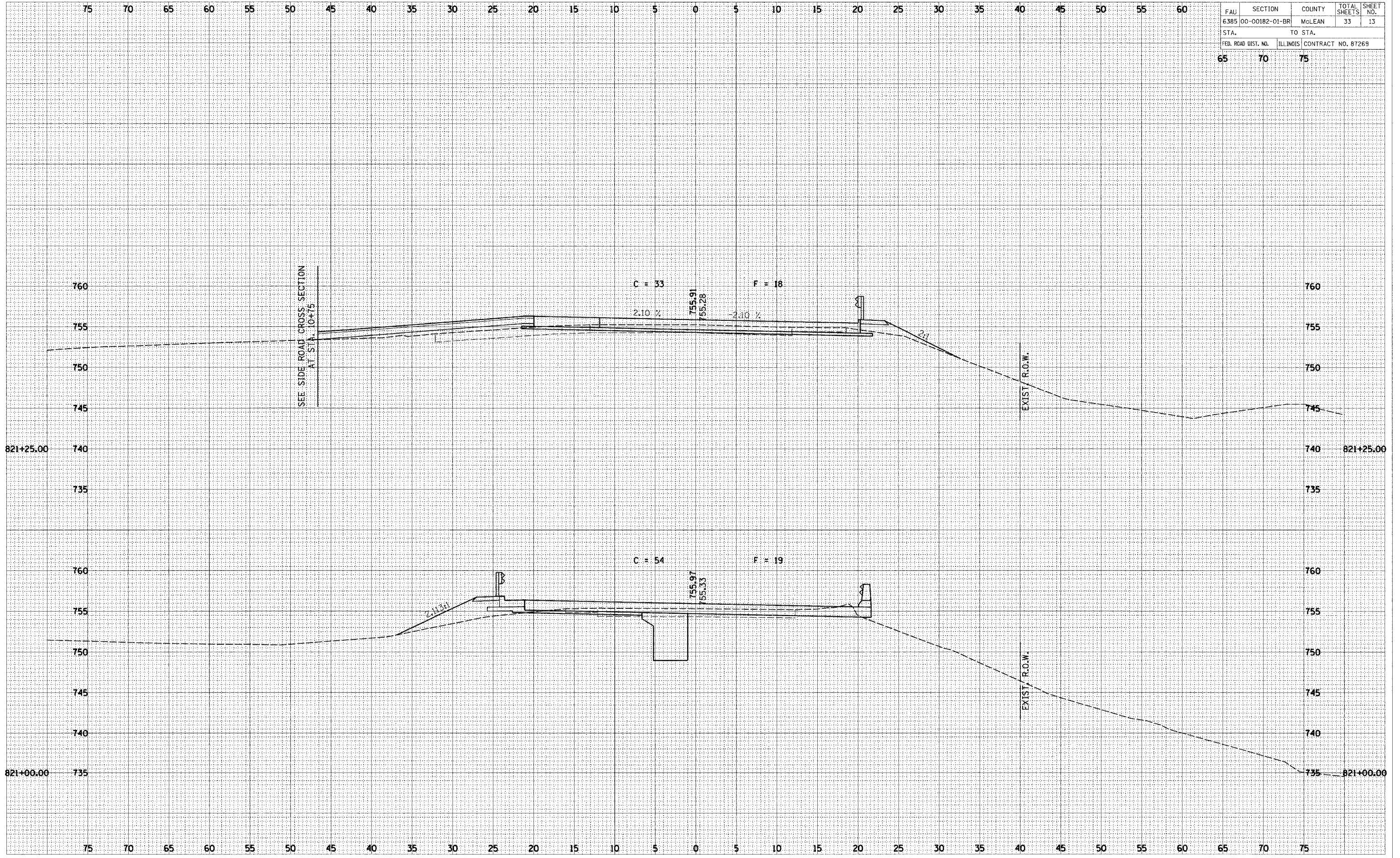


FAL	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6385	00-00182-01-BR	McLEAN	33	13
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 87269		

65 70 75

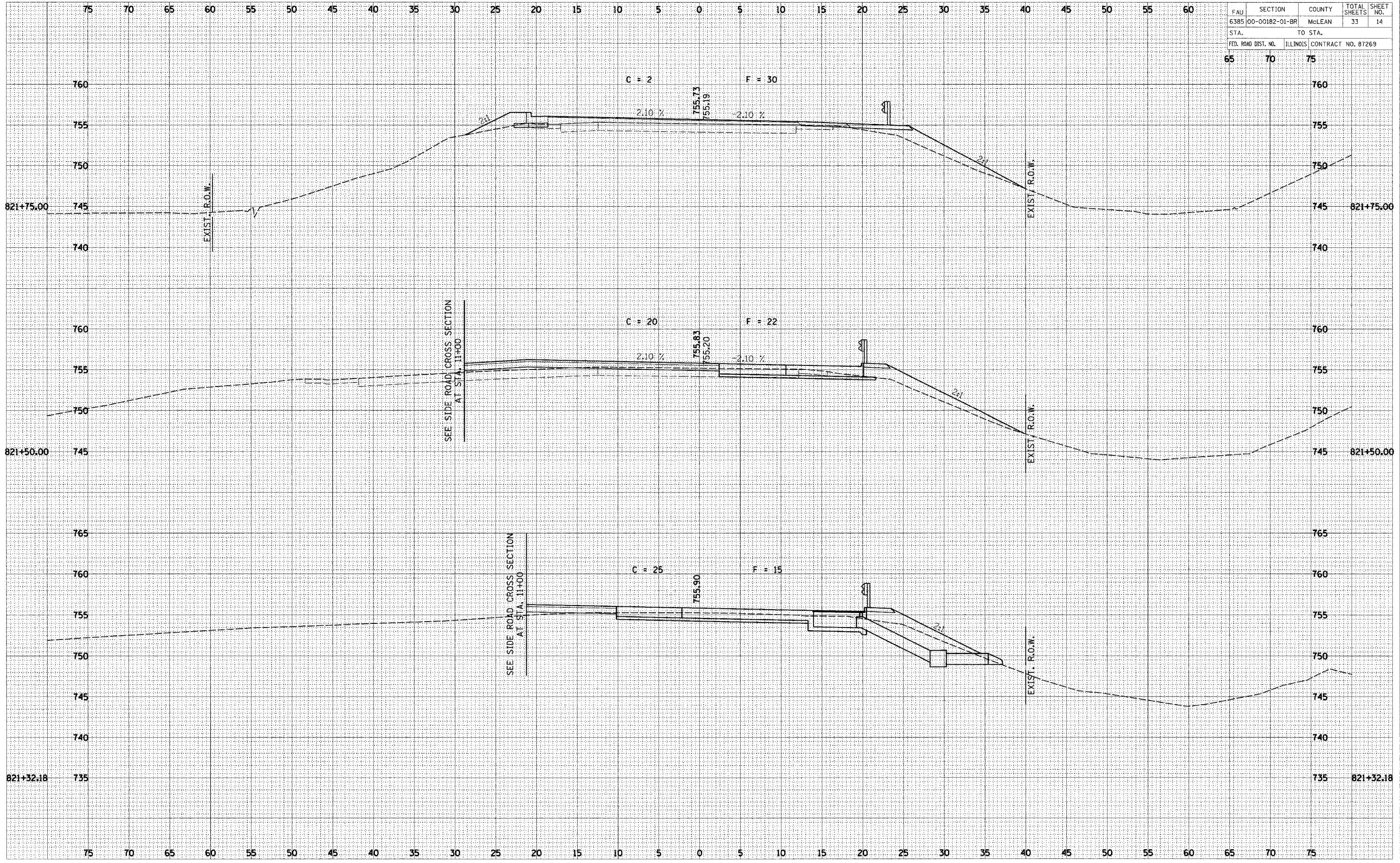
FINAL SURVEY	DATE
SURVEYED	
TEMPLATE	
AREAS	
CHECKED	

ORIGINAL SURVEY	DATE
SURVEYED	
TEMPLATE	
AREAS	
CHECKED	





FAU	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6385	00-00182-01-BR	McLEAN	33	14
STA. 65		TO STA. 75		
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 87269		



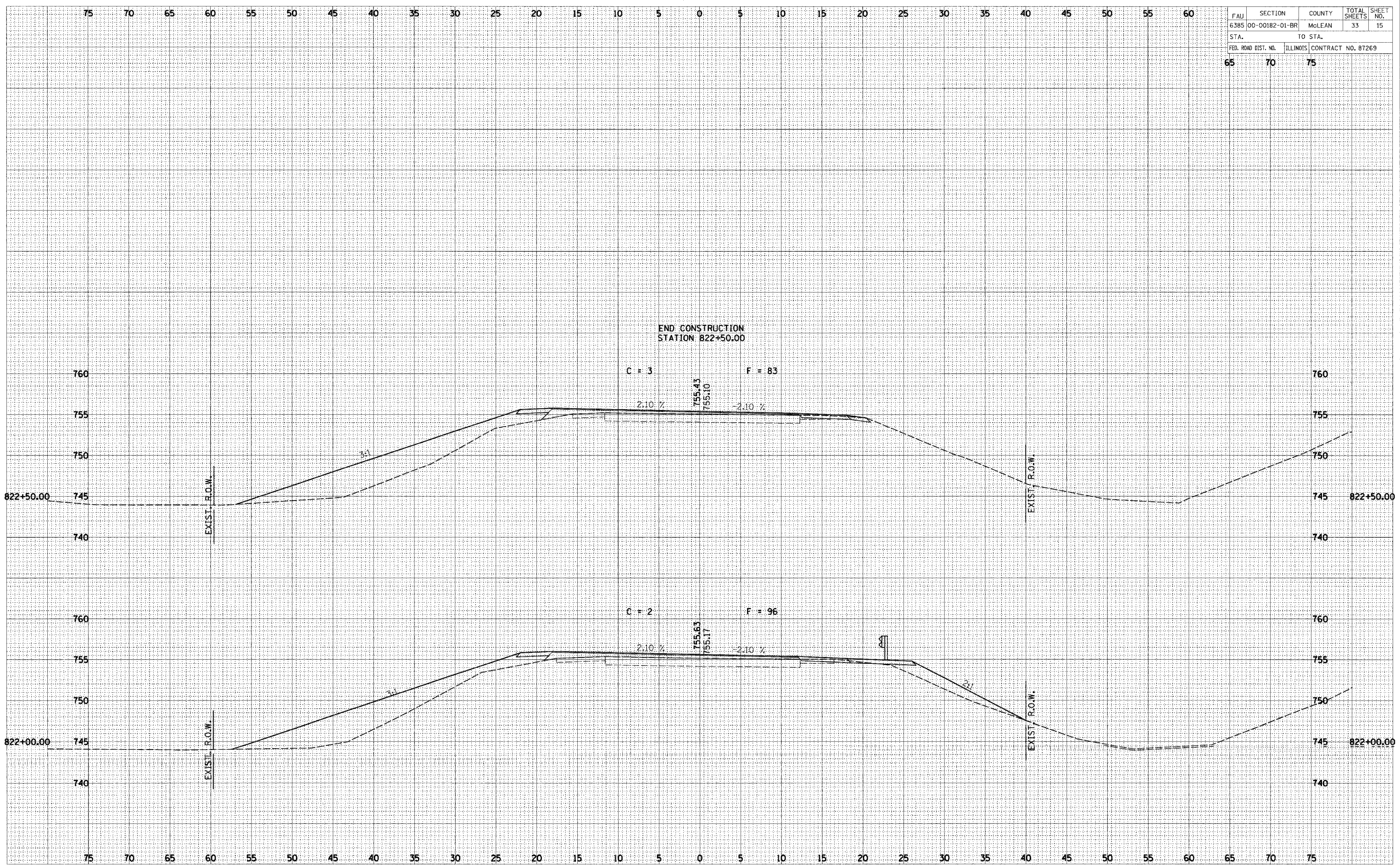
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 SURVEYED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 TEMPLATE: \_\_\_\_\_  
 NOTE BOOK NO.: \_\_\_\_\_  
 AREAS CHECKED: \_\_\_\_\_

ORIGINAL SURVEY BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 TEMPLATE: \_\_\_\_\_  
 NOTE BOOK NO.: \_\_\_\_\_  
 AREAS CHECKED: \_\_\_\_\_

FAU	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6385	00-00182-01-BR	McLEAN	33	15
STA. 65		TO STA. 70		75
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 87269		

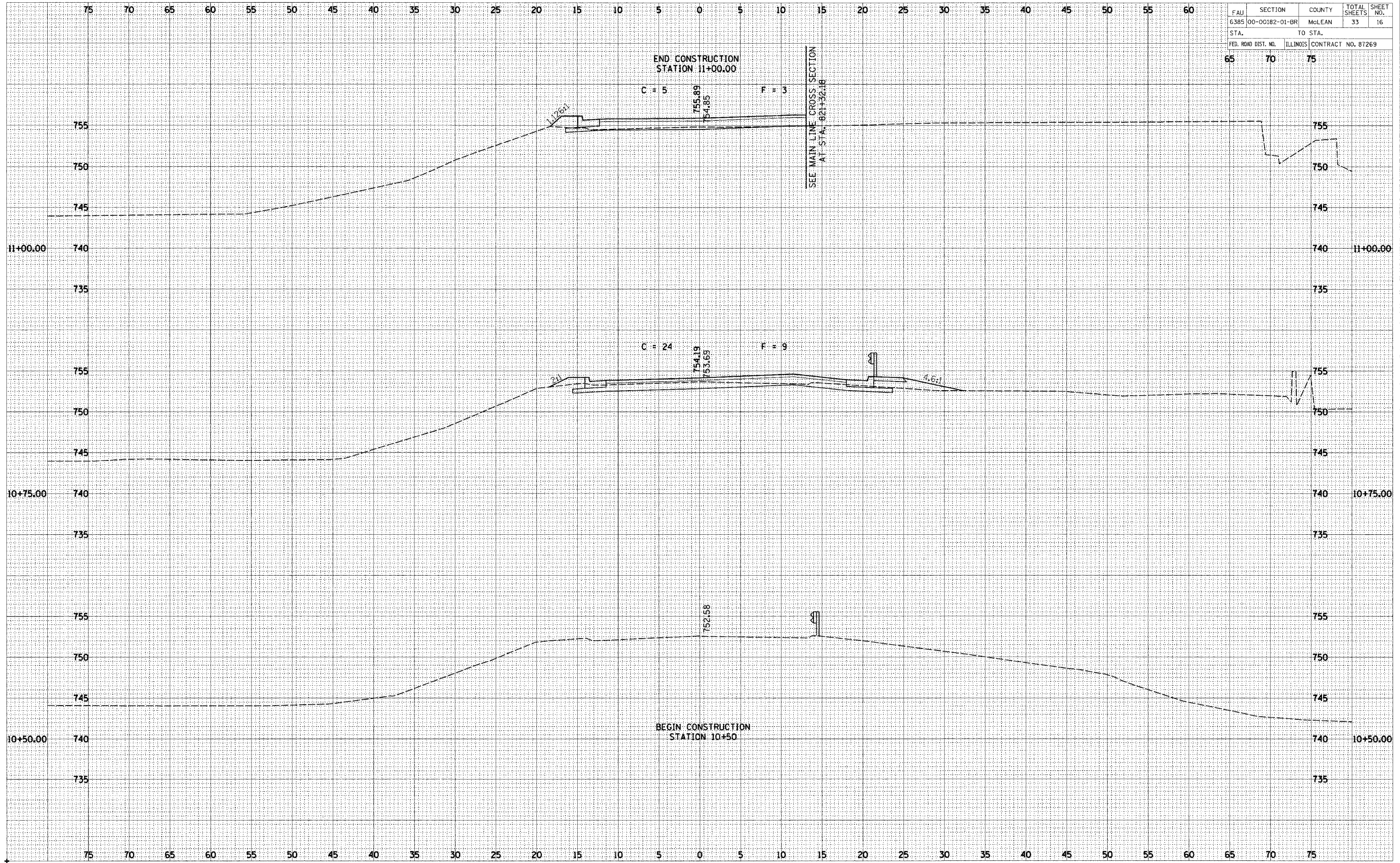
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 SURVEYED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 TEMPLATE NO.: \_\_\_\_\_  
 NOTE BOOK NO.: \_\_\_\_\_  
 AREAS CHECKED: \_\_\_\_\_

ORIGINAL SURVEY  
 SURVEYED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 TEMPLATE NO.: \_\_\_\_\_  
 NOTE BOOK NO.: \_\_\_\_\_  
 AREAS CHECKED: \_\_\_\_\_





FAU	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6385	00-00182-01-BR	McLEAN	33	16
STA.		TO STA.		
65		75		
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 87269		

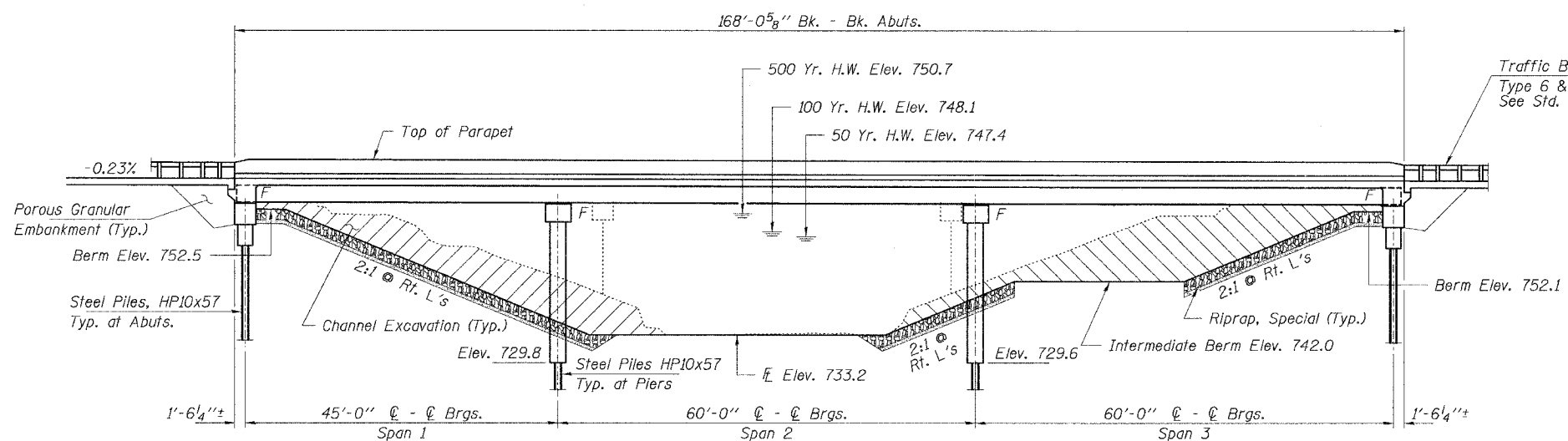


FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	TEMP. FILE	
AREAS	CHECKED	
NO.		

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	TEMP. FILE	
AREAS	CHECKED	
NO.		

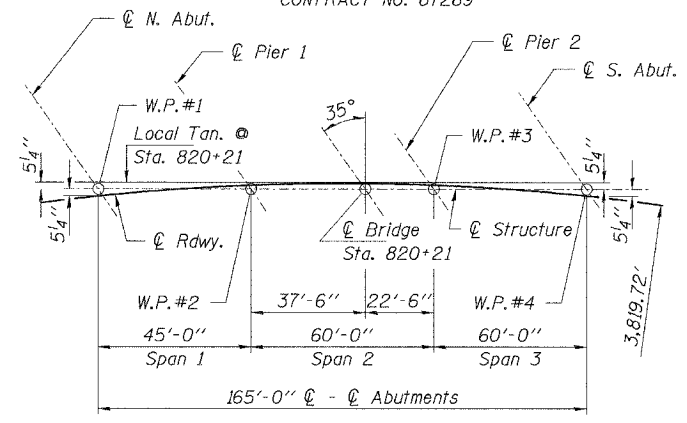
ROUTE NO.	SECTION	COUNTY	DATE	SHEET
F.A.U. 6385	00-00182-01-BR	McLEAN	33	17
FED. ROAD DIST. NO.	ALLIANCE	FED. AID PROJECT - BRN-822743		

CONTRACT NO. 87269



**ELEVATION**

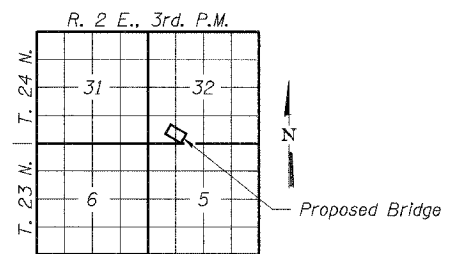
Note: Channel Excavation quantity is included with Roadway Plans.



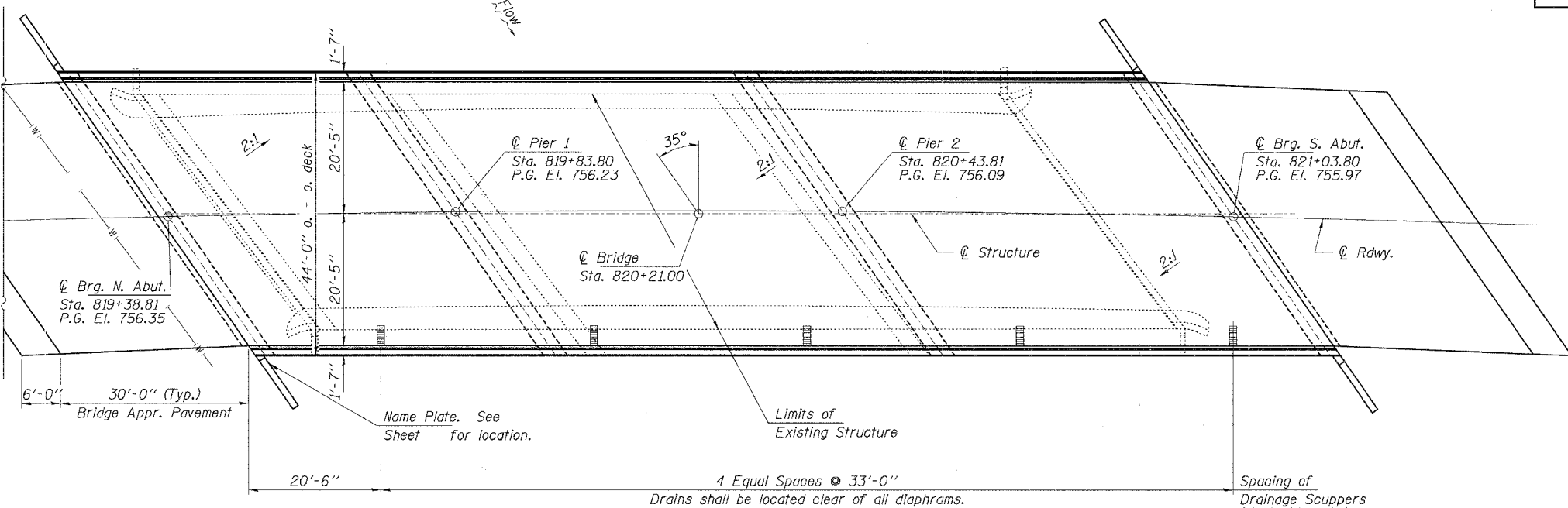
**OFFSET SKETCH**

SUGAR CREEK  
BUILT 200 BY  
McLEAN COUNTY  
SEC. 00-00182-01-BR  
F.A.U. ROUTE 6385 / C.H. 70  
F.A. PROJ. BRM-5227(43)  
STR. NO. 057-5306 LOADING HS 20

**NAME PLATE**  
See Std. 515001



**LOCATION SKETCH**



**PLAN**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Superstructure	Cu. Yd.	249.4		249.4
Concrete Structures	Cu. Yd.		83.0	83.0
Furnishing and Erecting Structural Steel	L. Sum	1		1
Reinforcement Bars, Epoxy Coated	Pound	62,210	10,890	73,100
Steel Piles HP10x57	Foot		1,300	1,300
Test Pile Steel HP10x57	Each		2	2
Name Plates	Each		1	1
Riprap, Special	Sq. Yd.			1,060
Protective Coat	Sq. Yd.	903		903
Porous Granular Embankment	Ton			250
Bar Splicers	Each	84		84
Removal of Existing Structures	Each		1	1
Drainage Scuppers	Each	5		5
Underwater Str. Exc. Protection, Location 1	Each		1	1
Underwater Str. Exc. Protection, Location 2	Each		1	1
Concrete Encasement	Cu. Yd.		28.8	28.8
Bridge Deck Grooving	Sq. Yd.	763		763
Stud Shear Connectors	Each	3,042		3,042
Slope Wall Removal	Sq. Yd.			765

**DESIGN SPECIFICATIONS**  
2002 AASHTO & Applicable Interims

**LOADING HS 20-44**

Allow 25#/sq. ft. for future wearing surface.

**DESIGN STRESSES**

$f'_c = 3,500$  p.s.i.  
 $f_y = 60,000$  p.s.i. (Reinforcement)  
 $f_y = 50,000$  p.s.i. (Structural Steel) (M270 Gr. 50W)

**SEISMIC DATA**

Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.045g  
Site Coefficient (S) = 1.5

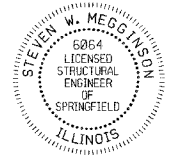
**WATERWAY INFORMATION**

Drainage Area = 20.1 Sq. Mi. Low Grade Elev. 754.6 @ Sta. 825+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exst. Prop.	Nat. H.W.E.	Head - ft. Exst. Prop.	Headwater El. Exst. Prop.
Design	50	3,980	620 980	747.4	1.7 1.5	749.1 748.9
Base	100	5,340	670 1,050	748.1	1.9 1.6	750.0 749.7
Overtopping	100	-	-	-	-	-
Max. Calc.	500	7,600	870 1,350	750.7	2.2 2.0	752.9 752.7

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO Standard Specifications for Highway Bridges".

*Steven W. Megginson* 11-15-05  
ILLINOIS STRUCTURAL NO. 6064



Expires 11-30-06

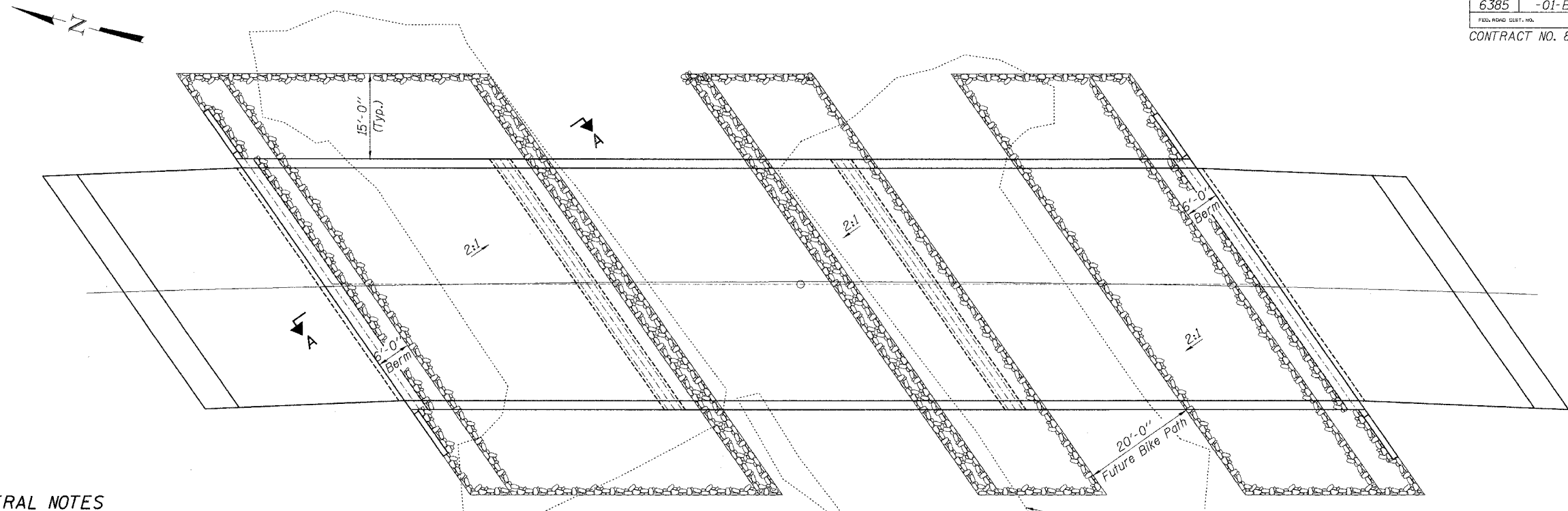
**HLR**  
Rice, Berry and Associates  
A Division of Hampton, Lenzini and Renwick, Inc.  
Civil & Structural Engineers  
3085 Stevenson Drive  
Suite 201  
Springfield, Illinois 62703  
217-546-3400  
P.O. Box 1036  
DuQuoin, Illinois 62832  
618-790-4637  
Date: 11/15/05  
DESIGNED: P.S.L. CHECKED: S.W.M. DRAWN: D.B.

**GENERAL PLAN AND ELEVATION**

F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK  
SECTION 00-00182-01-BR  
McLEAN COUNTY  
STRUCTURE 057-5306 / STATION 820+21

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
F.A.U. 6385	00-00182-01-BR	McLEAN	33	18
FED. ROAD DIST. NO.		ILLINOIS	FED. ROAD PROJECT - BR-5227(18)	

CONTRACT NO. 87269



**RIPRAP PLAN**

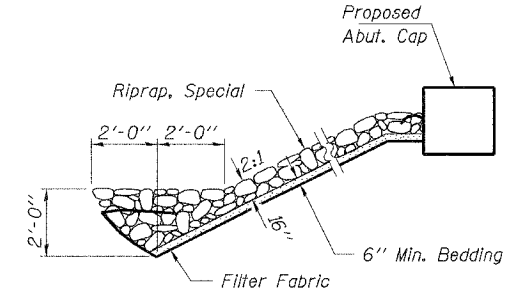
Existing Slopewall  
Removal (Typ.) = 765 Sq. Yds.

**GENERAL NOTES**

- Fasteners shall be high strength bolts AASHTO M164, Type 3 in unpainted areas and mechanically galvanized AASHTO M 164, Type 1 or 2 in painted areas. Bolts 1/2"Ø, open holes 15/16Ø, unless otherwise noted.
- Calculated weight of Structural Steel = 131,600 lbs.
- All structural steel shall be AASHTO M 270 Grade 50W.
- Field welding of construction accessories to beams will not be permitted.
- Anchor bolts shall be set before bolting diaphragms over supports.
- The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material.
- Reinforcement bars shall conform to the requirements of AASHTO M31 or M322, Grade 60.
- The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.
- Layout of riprap may be varied in the field to suit ground conditions as directed by the Engineer.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within an 1/8 inch tolerance. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/2" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
- The Contractor shall drive one HP10x57 test piles in a permanent location at the South Abutment and one HP10x57 test pile in a permanent location at Pier 1, as directed by the Engineer before ordering the remainder of the piles.
- Excavation required to construct the Abutments and Piers shall be considered incidental to Concrete Structures. No additional compensation will be allowed for Structure Excavation.
- All proposed construction activity shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act. The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.
- The existing structural steel coating may contain lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- AASHTO M 270 Grade 50W structural steel shall only be painted, at the ends of the beams, for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Those areas shall be primed in the shop with an inorganic zinc rich primer per AASHTO M 300, Type 1. No field painting shall be required. All structural steel shall be cleaned as specified in the special provision for "Surface Preparation and Painting Requirements for Weathering Steel".
- All Construction joints shall be bonded.
- See Sheets 32 & 33 for Borings.

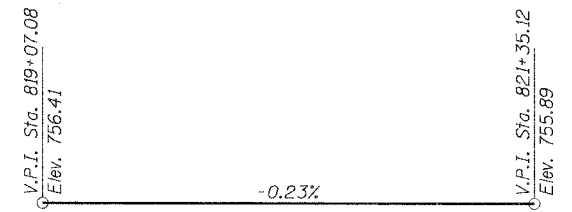
**CURVE DATA**

P.I. STA. 822+13.37  
 $\Delta = 12^\circ 12' 36''$  (RT)  
 $D = 1^\circ 30' 00''$   
 $T = 408.55'$   
 $R = 3,819.72'$   
 $L = 814.00'$   
 $E = 21.79'$   
P.C. STA. 818+04.82  
P.T. STA. 826+18.83  
S.E. = 0.021'/'



**SECTION A-A**

Note: See Special Provisions for Riprap, Special.



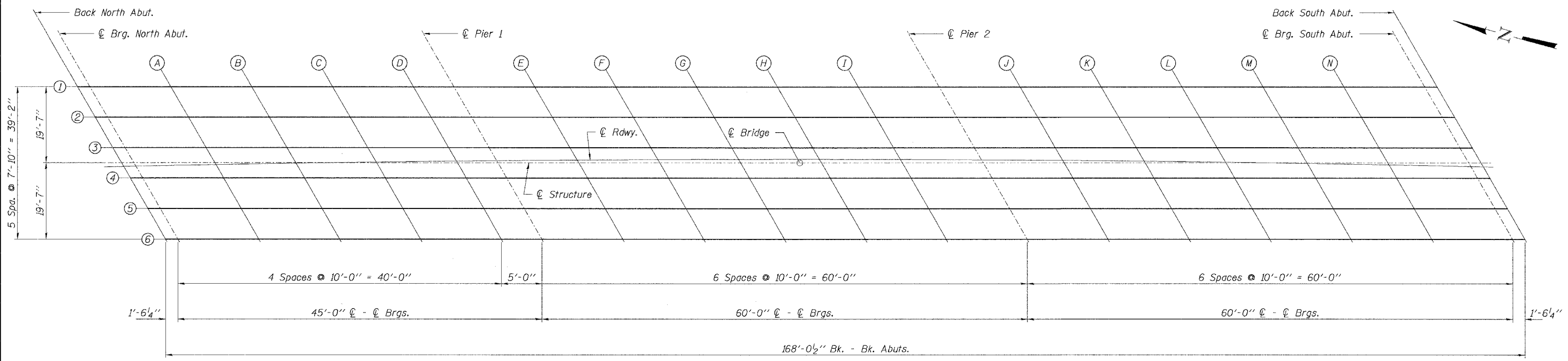
**PROFILE GRADE**

No Vertical Curve

**HLR**  
Rice, Berry and Associates  
A Division of Hampton, Lenzini and Renwick, Inc.  
Civil & Structural Engineers  
3085 Stevenson Drive  
Suite 201  
Springfield, Illinois 62703  
217-546-3400  
P.O. Box 1036  
DuQuoin, Illinois 62832  
618-790-4637  
Account Number 12-59-0033-1  
Date: 11/15/05  
DESIGNED: P.S.L. CHECKED: S.W.M. DRAWN: D.B.

**RIPRAP DETAIL**  
F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK  
SECTION 00-00182-01-BR  
McLEAN COUNTY  
STRUCTURE 057-5306 / STATION 820+21

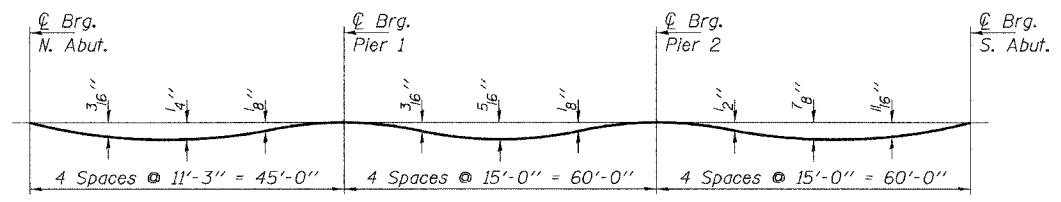
CONTRACT NO. 87269



**PLAN**

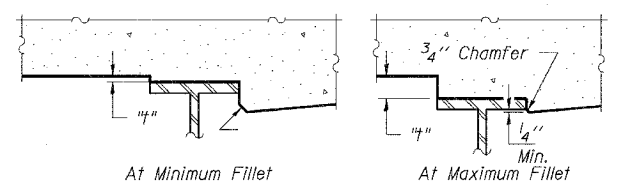
**BEAM 1**

	Bk. of N. Abut.	C. of N. Abut.	Span 1				C. PIER 1	Span 2					C. PIER 2	Span 3					C. of S. Abut.	Bk. of S. Abut.
			A	B	C	D		E	F	G	H	I		J	K	L	M	N		
Theoretical Grade Elevation	756.803	756.799	756.771	756.744	756.717	759.691	756.678	756.653	756.628	756.604	756.580	756.557	756.534	756.512	756.490	756.469	756.449	756.429	756.409	756.407
Theoretical Grade Elevation Adjusted for D.L. Deflection	756.803	756.799	756.785	756.762	756.729	756.695	756.678	756.663	756.646	756.627	756.594	756.562	756.534	756.539	756.542	756.543	756.512	756.468	756.409	756.407
Bottom of Slab Elevation	756.178	756.174	756.160	756.137	756.104	756.070	756.053	756.038	756.021	756.002	755.969	755.937	755.909	755.914	755.917	755.918	755.887	755.843	755.784	755.782
Top of Steel																				
Fillet Height "4"																				



**DEAD LOAD DEFLECTION DIAGRAM**  
(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheets 19 & 20.



To determine "4": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations, subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 19 & 20, minus slab thickness, equals the fillet heights "4" above top flange of beams.

**FILLET HEIGHTS**

**HLR**  
Rice, Berry and Associates  
A Division of Hampton,  
Lonzini and Renwick, Inc.  
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3095 Stevenson Drive  
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217-546-3400  
P.O. Box 1036  
DuQuoin, Illinois 62832  
618-790-4637  
Date: 11/15/05  
Account Number: 12-59-0033-1  
DESIGNED: P.S.L. | CHECKED: S.W.M. | DRAWN: D.B.

**SLAB ELEVATIONS**  
F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK  
SECTION 00-00182-01-BR  
McLEAN COUNTY  
STRUCTURE 057-5306 / STATION 820+21

ROUTE NO. F.A.U. 6385	SECTION 00-00182 -01-BR	COUNTY McLEAN	TOTAL SHEETS 33	SHEET NO. 20
FED. ROAD DIST. NO.		ILLINOIS	FED. RD PROJECT: BRH-527439	

CONTRACT NO. 87269

**BEAM 2**

	Bk. of N. Abut.	C of N. Abut.	Span 1				C PIER 1	Span 2				C PIER 2	Span 3				C of S. Abut.	Bk. of S. Abut.		
			A	B	C	D		E	F	G	H		I	J	K	L			M	N
Theoretical Grade Elevation	756.624	756.620	756.592	756.565	756.539	756.513	756.500	756.475	756.450	756.426	756.403	756.380	756.357	756.335	756.314	756.293	756.273	756.253	756.234	756.231
Theoretical Grade Elevation Adjusted for D.L. Deflection	756.624	756.620	756.606	756.584	756.551	756.516	756.500	756.485	756.468	756.450	756.416	756.385	756.357	756.362	756.365	756.367	756.337	756.292	756.234	756.231
Bottom of Slab Elevation	755.999	755.995	755.981	755.959	755.926	755.891	755.875	755.860	755.843	755.825	755.791	755.760	755.732	755.737	755.740	755.742	755.712	755.667	755.609	755.606
Top of Steel																				
Fillet Height "f"																				

**BEAM 3**

	Bk. of N. Abut.	C of N. Abut.	Span 1				C PIER 1	Span 2				C PIER 2	Span 3				C of S. Abut.	Bk. of S. Abut.		
			A	B	C	D		E	F	G	H		I	J	K	L			M	N
Theoretical Grade Elevation	756.445	756.440	756.413	756.386	756.360	756.334	756.322	756.297	756.272	756.249	756.225	756.203	756.181	756.159	756.138	756.117	756.097	756.078	756.059	756.056
Theoretical Grade Elevation Adjusted for D.L. Deflection	756.445	756.440	756.427	756.405	756.372	756.338	756.322	756.307	756.291	756.272	856.239	756.208	756.181	756.186	756.189	756.191	756.161	756.117	759.059	756.056
Bottom of Slab Elevation	755.820	755.815	755.802	755.780	755.747	755.713	755.697	755.682	755.666	755.647	755.614	755.583	755.556	755.561	755.564	755.566	755.536	755.492	755.434	755.431
Top of Steel																				
Fillet Height "f"																				

**C ROADWAY**

	Bk. of N. Abut.	C of N. Abut.	Span 1				C PIER 1	Span 2				C PIER 2	Span 3				C of S. Abut.	Bk. of S. Abut.		
			A	B	C	D		E	F	G	H		I	J	K	L			M	N
Theoretical Grade Elevation	756.355	756.351	756.324	756.297	756.271	756.245	756.233	756.208	756.184	756.160	756.137	756.114	756.092	756.071	756.050	756.029	756.010	755.990	755.972	755.969
Theoretical Grade Elevation Adjusted for D.L. Deflection	756.355	756.351	756.338	756.315	756.283	756.249	756.233	756.218	756.202	756.184	756.151	756.120	756.092	756.098	756.101	756.103	756.073	756.029	755.972	755.969

**BEAM 4**

	Bk. of N. Abut.	C of N. Abut.	Span 1				C PIER 1	Span 2				C PIER 2	Span 3				C of S. Abut.	Bk. of S. Abut.		
			A	B	C	D		E	F	G	H		I	J	K	L			M	N
Theoretical Grade Elevation	756.266	756.261	756.234	756.208	756.182	756.156	756.144	756.119	756.095	756.071	756.048	756.026	756.004	755.983	755.962	755.942	755.922	755.903	755.884	755.881
Theoretical Grade Elevation Adjusted for D.L. Deflection	756.266	756.261	756.248	756.226	756.194	756.160	756.144	756.129	756.113	756.095	756.062	756.032	756.004	756.009	756.013	756.016	755.986	755.942	755.884	755.881
Bottom of Slab Elevation	755.641	755.636	755.623	755.601	755.569	755.535	755.519	755.504	755.488	755.470	755.437	755.407	755.379	755.384	755.388	755.391	755.361	755.317	755.259	755.256
Top of Steel																				
Fillet Height "f"																				

**BEAM 5**

	Bk. of N. Abut.	C of N. Abut.	Span 1				C PIER 1	Span 2				C PIER 2	Span 3				C of S. Abut.	Bk. of S. Abut.		
			A	B	C	D		E	F	G	H		I	J	K	L			M	N
Theoretical Grade Elevation	756.086	756.082	756.055	756.029	756.003	755.978	755.966	755.941	755.917	755.894	755.871	755.849	755.828	755.807	755.786	755.766	755.747	755.728	755.709	755.707
Theoretical Grade Elevation Adjusted for D.L. Deflection	756.086	756.082	756.069	756.048	756.015	755.982	755.966	755.952	755.936	755.918	755.885	755.855	755.828	755.833	755.837	755.840	755.810	755.767	755.709	755.707
Bottom of Slab Elevation	755.461	755.457	755.444	755.423	755.390	755.357	755.341	755.327	755.311	755.293	755.260	755.230	755.203	755.208	755.212	755.215	755.185	755.142	755.084	755.082
Top of Steel																				
Fillet Height "f"																				

**BEAM 6**

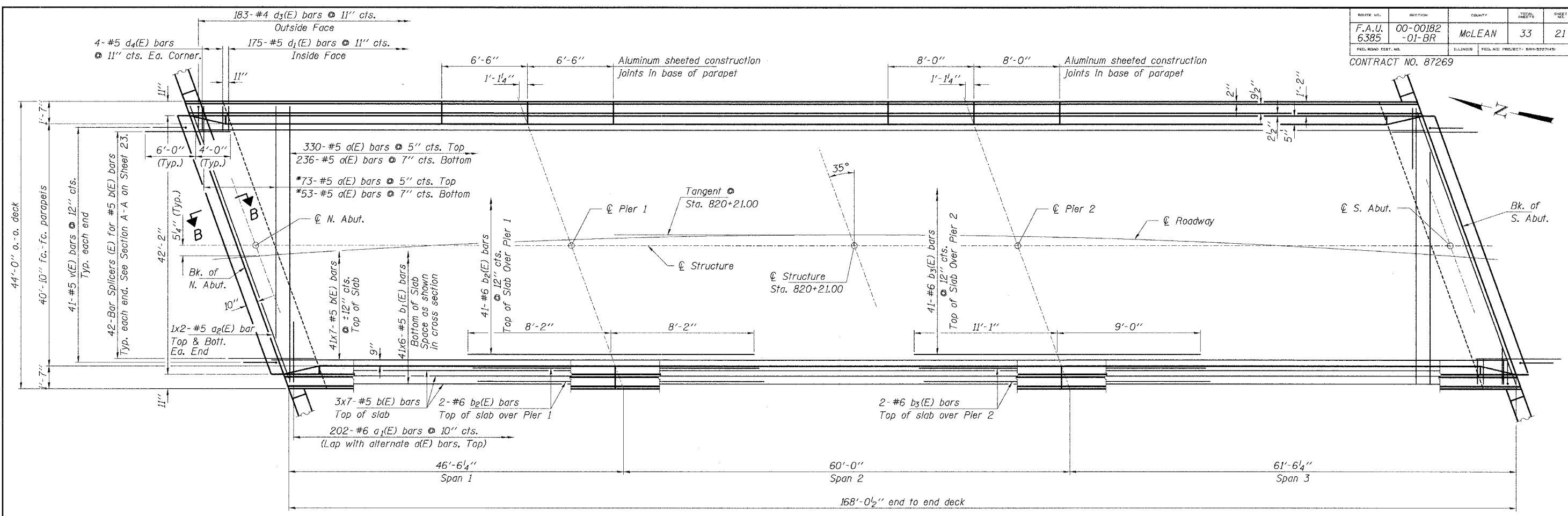
	Bk. of N. Abut.	C of N. Abut.	Span 1				C PIER 1	Span 2				C PIER 2	Span 3				C of S. Abut.	Bk. of S. Abut.		
			A	B	C	D		E	F	G	H		I	J	K	L			M	N
Theoretical Grade Elevation	755.907	755.903	755.877	755.851	755.825	755.800	755.788	755.764	755.740	755.717	755.695	755.673	755.651	755.630	755.610	755.590	755.571	755.553	755.535	755.532
Theoretical Grade Elevation Adjusted for D.L. Deflection	755.907	755.903	755.891	755.869	755.837	755.804	755.788	755.774	755.758	755.741	755.708	755.678	755.651	755.657	755.662	755.664	755.635	755.592	755.535	755.532
Bottom of Slab Elevation	755.282	755.278	755.266	755.244	755.212	755.179	755.163	755.149	755.133	755.116	755.083	755.053	755.026	755.032	755.037	755.039	755.010	754.967	754.910	754.907
Top of Steel																				
Fillet Height "f"																				

**ILR**  
 Rice, Berry and Associates  
 A Division of Hampton, Lenzini and Renwick, Inc.  
 Civil & Structural Engineers  
 3085 Stevenson Drive  
 Suite 201  
 Springfield, Illinois 62703  
 217-546-3400  
 Account Number: 12-59-0033-1  
 Date: 11/15/05  
 P.O. Box 1036  
 DuQuoin, Illinois 62832  
 618-790-4637  
 DESIGNED: P.S.L. CHECKED: S.W.M. DRAWN: D.B.

**SLAB ELEVATIONS**  
**F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK**  
**SECTION 00-00182-01-BR**  
**McLEAN COUNTY**  
**STRUCTURE 057-5306 / STATION 820+21**

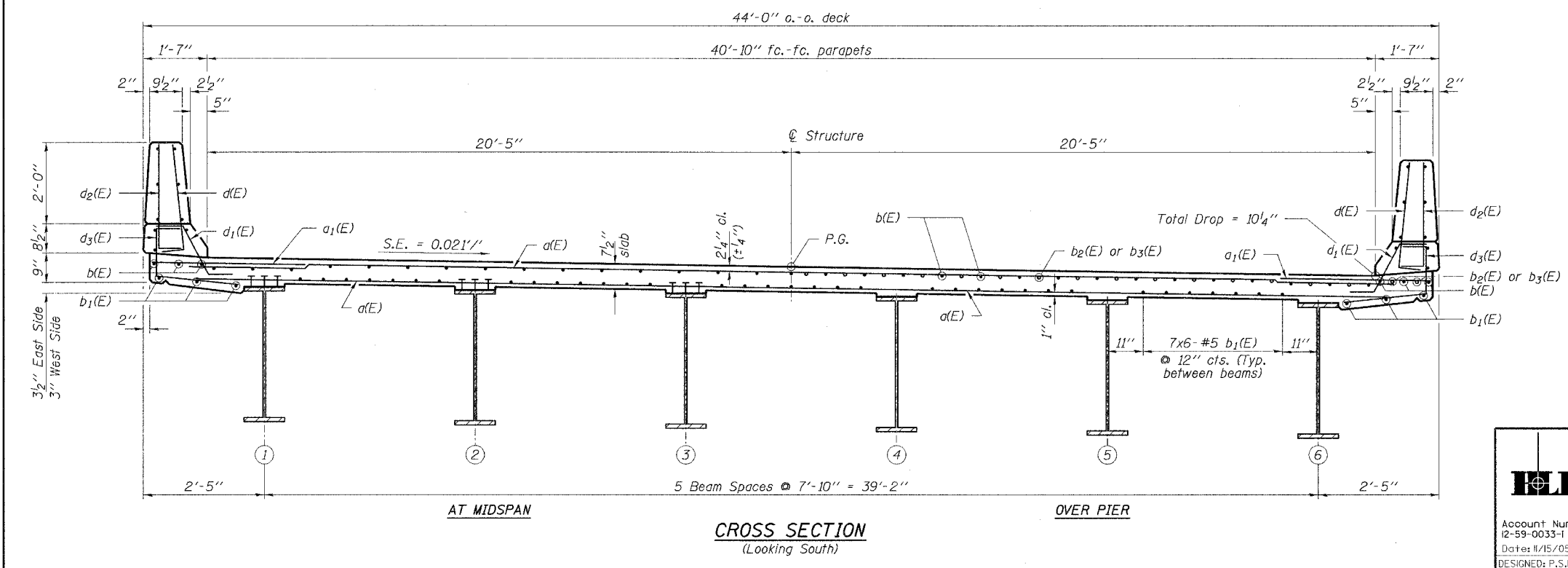


ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
F.A.U. 6385	00-00182-01-BR	McLEAN	33	21
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT: BRN-827428	CONTRACT NO. 87269	



**PLAN**

\* Order a(E) bars full length. Cut to fit skew & use remainder of bars in other end.



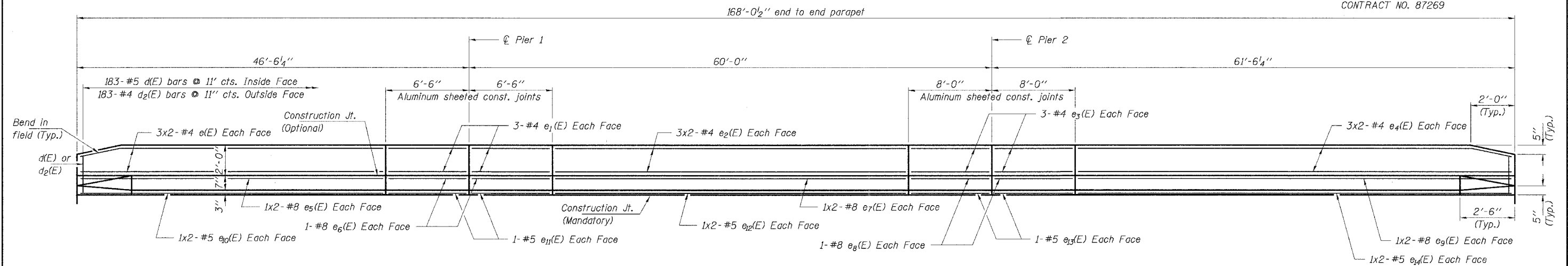
**CROSS SECTION**  
(Looking South)

Note: Bars indicated thus 41x7-#5 etc. indicates 41 lines of bars with 7 lengths per line.

**MIN. BAR LAPS**  
 #4 bars = 1'-8"  
 #5 bars = 2'-2"  
 #8 bars = 4'-6"

**HLR**  
 Rice, Berry and Associates  
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 Civil & Structural Engineers  
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**SUPERSTRUCTURE**  
 F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK  
 SECTION 00-00182-01-BR  
 McLEAN COUNTY  
 STRUCTURE 057-5306 / STATION 820+21



**INSIDE ELEVATION OF PARAPET**

**MIN. BAR LAPS**

- #4 bars = 1'-8"
- #5 bars = 2'-2"
- #8 bars = 4'-6"

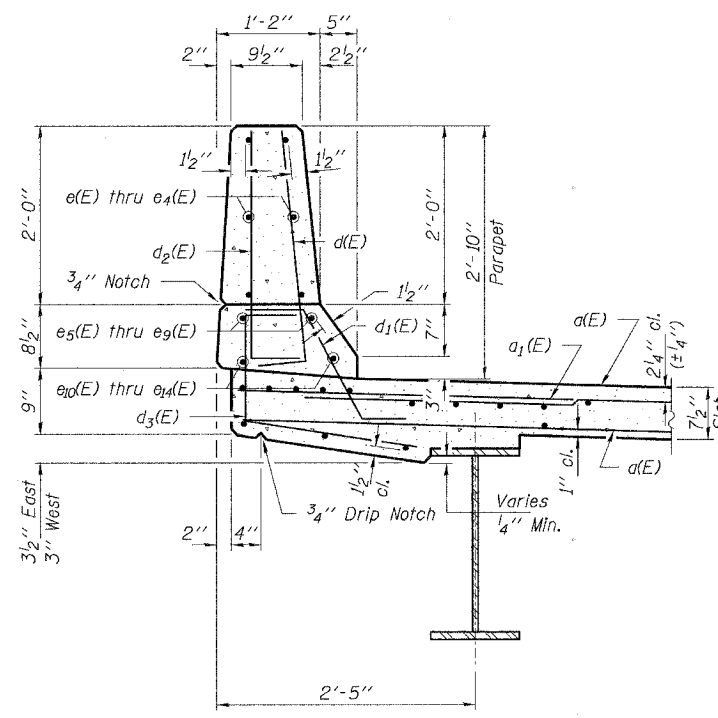
**SUPERSTRUCTURE BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d(E)	692	#5	42'-0"	—
d1(E)	404	#6	4'-0"	—
d2(E)	8	#5	27'-6"	—
d3(E)	40	#5	2'-0"	—
b(E)	329	#5	25'-10"	—
b1(E)	246	#5	29'-10"	—
b2(E)	45	#6	16'-4"	—
b3(E)	45	#6	20'-1"	—
d(E)	366	#5	3'-0"	—
d1(E)	350	#5	2'-5"	—
d2(E)	366	#4	3'-0"	—
d3(E)	366	#4	3'-2"	—
d4(E)	16	#5	2'-7"	—
e(E)	24	#4	20'-9"	—
e1(E)	24	#4	6'-3"	—
e2(E)	24	#4	23'-6"	—
e3(E)	24	#4	7'-9"	—
e4(E)	24	#4	27'-6"	—
e5(E)	8	#8	22'-3"	—
e6(E)	8	#8	6'-3"	—
e7(E)	8	#8	24'-11"	—
e8(E)	8	#8	7'-9"	—
e9(E)	8	#8	28'-11"	—
e10(E)	8	#5	21'-0"	—
e11(E)	8	#5	6'-3"	—
e12(E)	8	#5	23'-9"	—
e13(E)	8	#5	7'-9"	—
e14(E)	8	#5	27'-9"	—
m(E)	8	#6	26'-8"	—
m1(E)	12	#6	28'-0"	—
m2(E)	12	#6	19'-7"	—
m3(E)	10	#6	9'-3"	—
m4(E)	4	#6	2'-8"	—
s(E)	82	#5	6'-7"	—
s1(E)	72	#4	8'-10"	—
v1(E)	82	#5	3'-0"	—

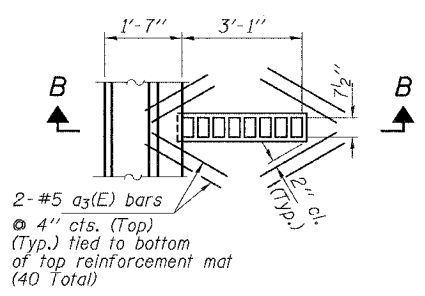
**BILL OF MATERIAL - CONT.**

Reinforcement Bars, Epoxy Coated	Pound	62,210
Concrete Superstructures	Cu. Yds.	249.4
Protective Coat	Sq. Yds.	903
Bar Splitters	Each	84
Bridge Deck Grooving	Sq. Yds.	763

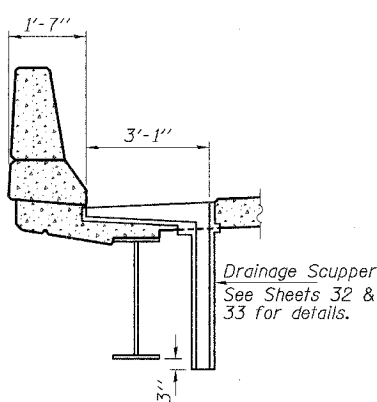
Note: Quantity for Protective Coat includes parapet.



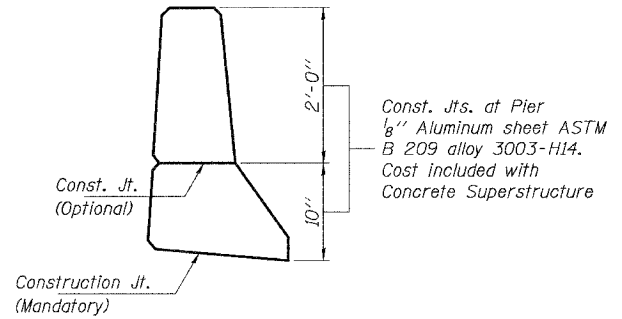
**SECTION THRU PARAPET**



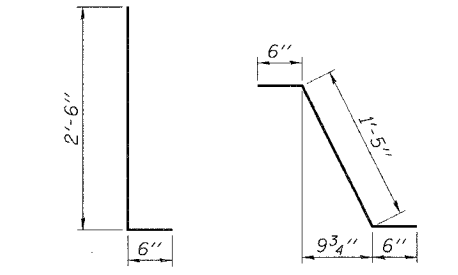
**PLAN**



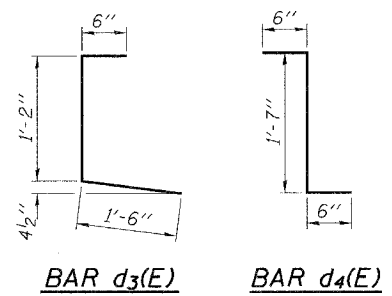
**SECTION B-B**



**PARAPET JOINT DETAILS**



**BARS d(E) & d2(E) BAR d1(E)**



**BAR d3(E) BAR d4(E)**

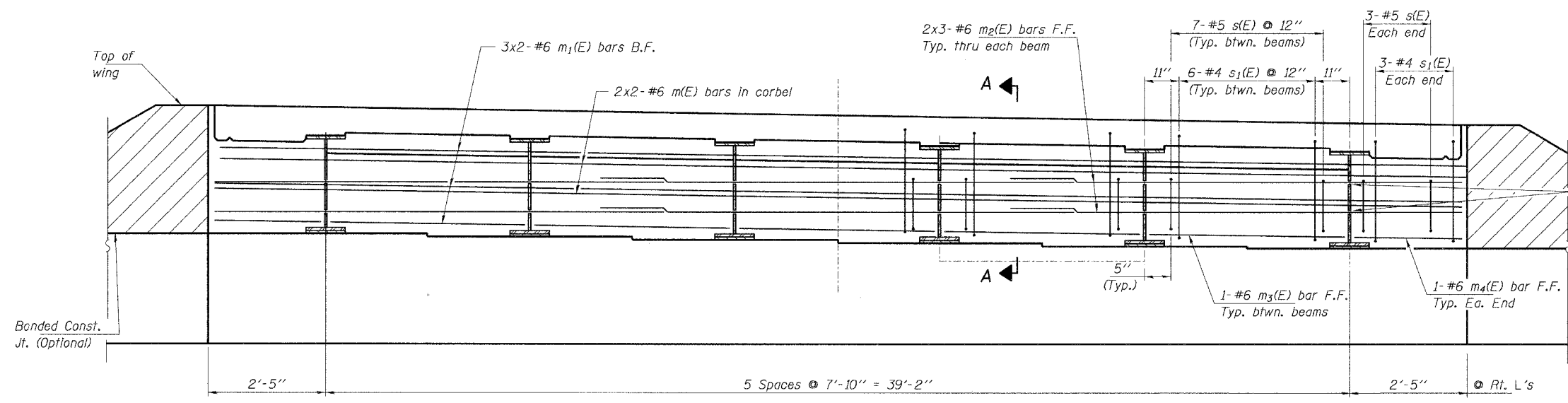
**HLR**  
 Rice, Berry and Associates  
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 Civil & Structural Engineers  
 3085 Stevenson Drive  
 Suite 201  
 Springfield, Illinois 62703  
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 DESIGNED: P.S.L. CHECKED: S.W.M. DRAWN: D.B.

**SUPERSTRUCTURE DETAILS**  
 F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK  
 SECTION 00-00182-01-BR  
 McLEAN COUNTY  
 STRUCTURE 057-5306 / STATION 820+21



ROUTE NO.	SECTION	COUNTY	SHEET	SHEET
F.A.U. 6385	00-00182-01-BR	McLEAN	33	23
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT - BRN-522743		

CONTRACT NO. 87269



1"Ø holes thru web for m<sub>2</sub>(E) bars (Typ.) See sheet 25 for detail.

BACK FACE

FRONT FACE

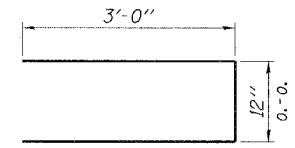
**DIAPHRAGM AT ABUTMENTS**

South Abut. (Looking South)  
North Abut. (Opposite Hang)  
F.F. - Front Face  
B.F. - Back Face

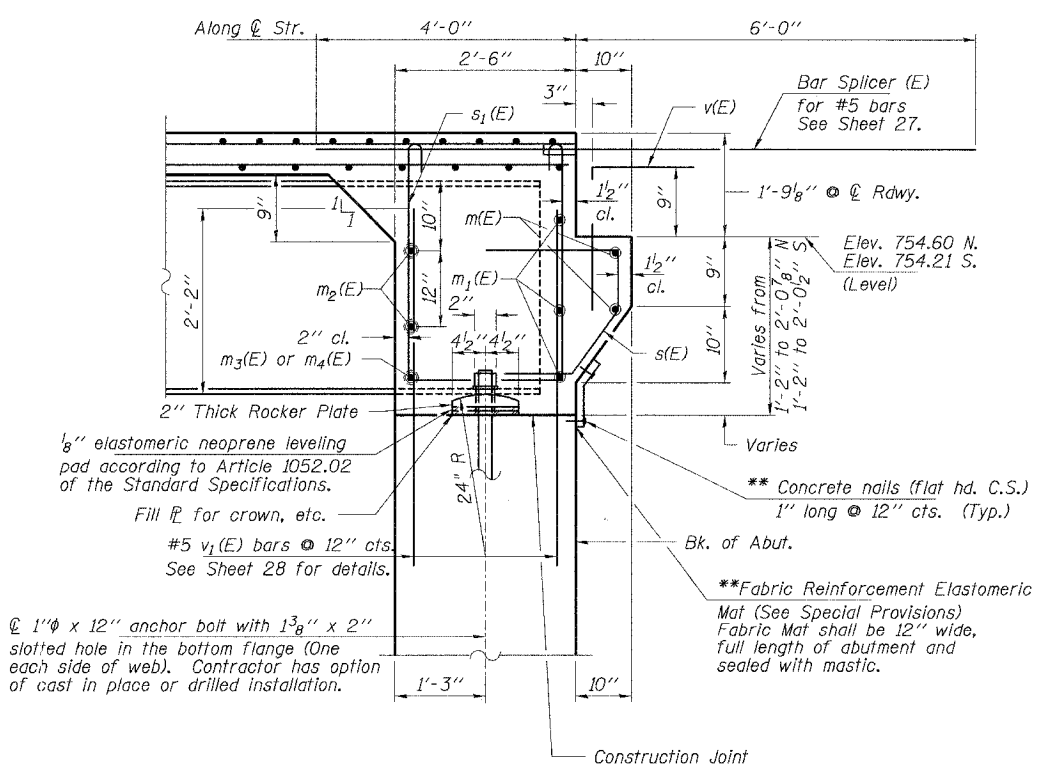
**MIN. BAR LAPS**

#6 bars = 2'-9"

**BAR a<sub>2</sub>(E)**

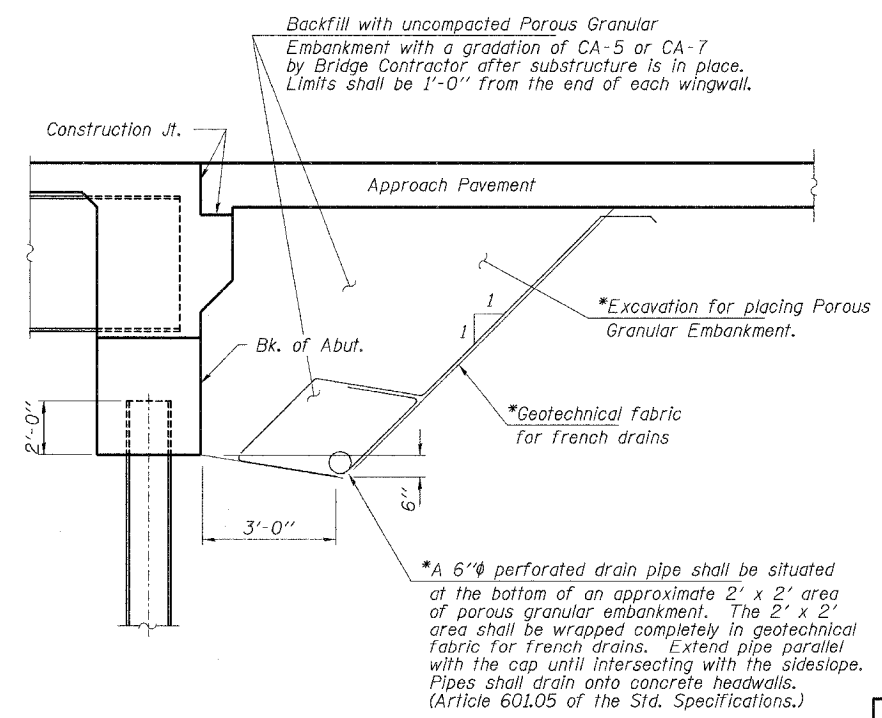


Notes: Reinforcement bars in diaphragms are billed with superstructure on sheet 22. Concrete in diaphragms is included with "Concrete Superstructure" on sheet 22. Reinforcement bars designated (E) shall be epoxy coated.



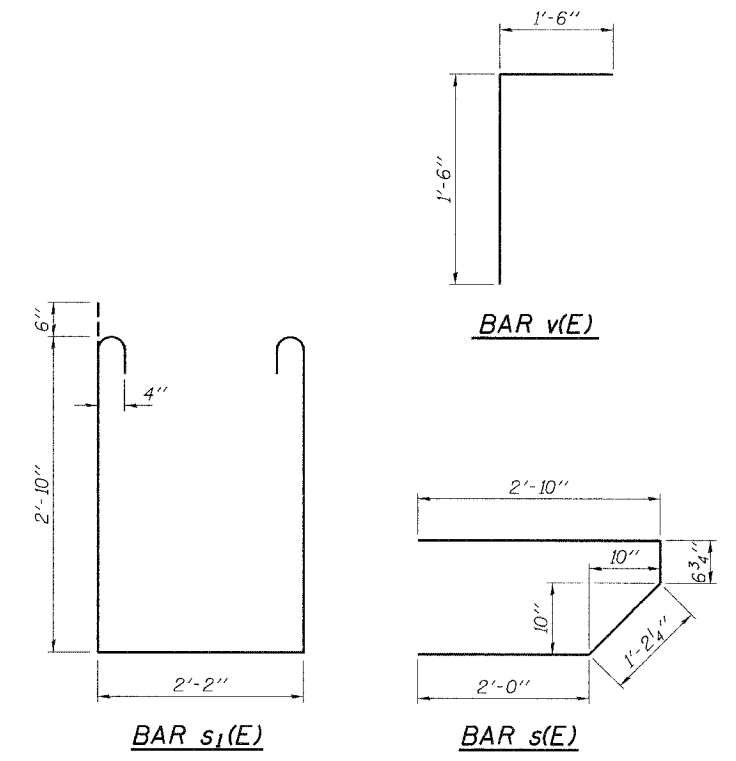
**SECTION A-A**

At Right L's  
\*\* Cost included with "Concrete Structures".

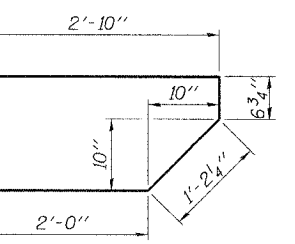


**UNDERDRAIN DETAILS AT ABUTMENTS**

\* Cost Included with Porous Granular Embankment.



**BAR v(E)**

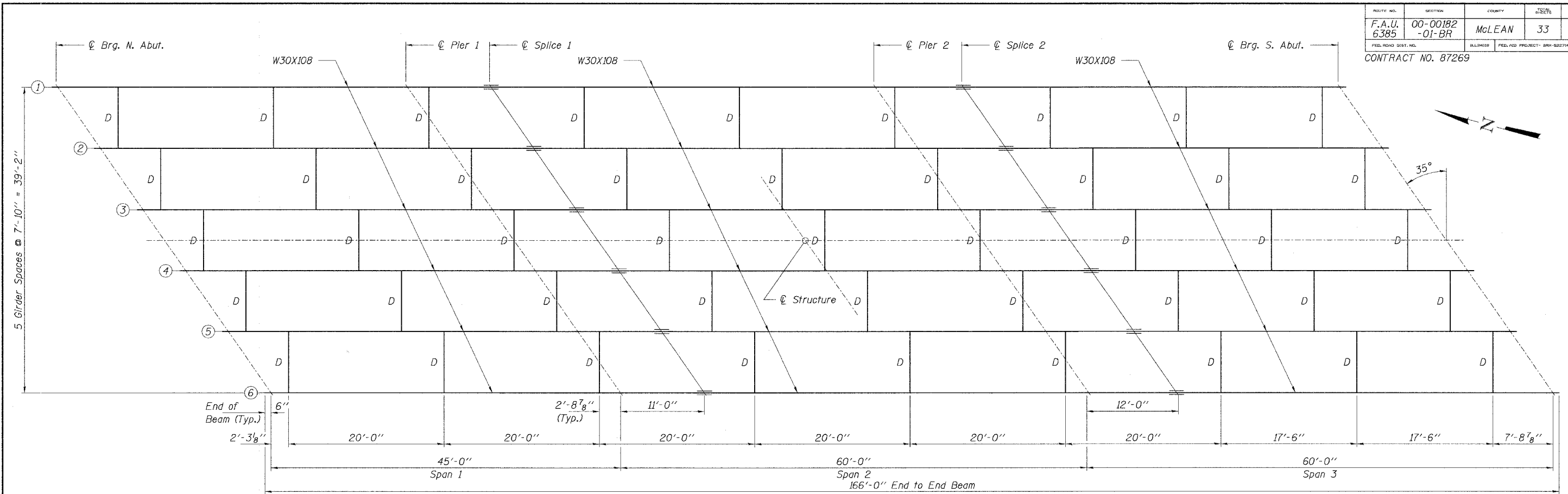


**BAR s(E)**

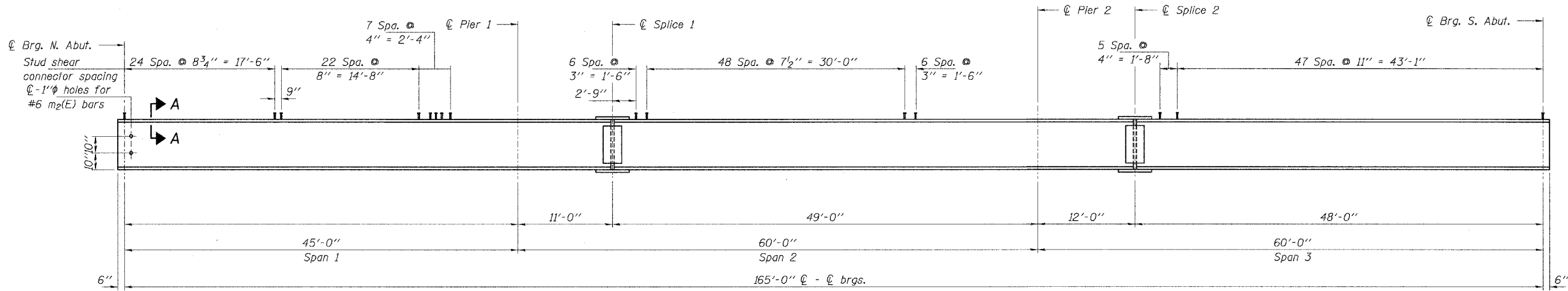
**HLR**  
Rice, Berry and Associates  
A Division of Hampton,  
Lenzini and Renwick, Inc.  
Civil & Structural Engineers  
3085 Stevenson Drive  
Suite 201  
Springfield, Illinois 62703  
217-546-3400  
P.O. Box 1036  
DuQuoin, Illinois 62832  
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**SUPERSTRUCTURE DETAILS**  
F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK  
SECTION 00-00182-01-BR  
McLEAN COUNTY  
STRUCTURE 057-5306 / STATION 820+21

ROUTE NO. F.A.U. 6385	SECTION 00-00182 -01-BR	COUNTY McLEAN	SHEET NO. 33	TOTAL SHEETS 24
FED. ROAD DIST. NO.		ILLINOIS PROJECT NO.	CONTRACT NO. 87269	

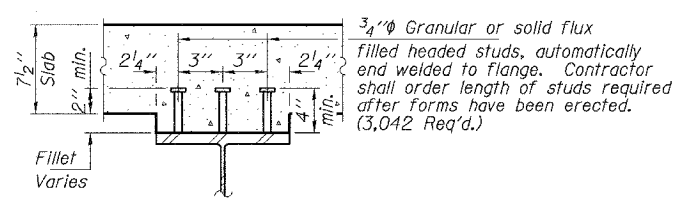


**PLAN**



**ELEVATION**

Notes:  
 N.T.R. Indicates Notch Toughness Requirements, Zone 2.  
 All structural steel shall be M270 Grade 50 W.



**SECTION A-A**

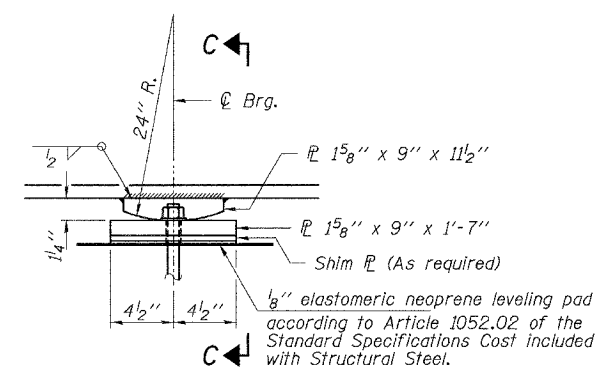
Location	¢ Brg. N. Abut.	¢ Pier #1	¢ Splice #1	¢ Pier #2	¢ Splice #2	¢ Brg. S. Abut.
BEAM 1	756.070	755.949	755.909	755.805	755.770	755.680
BEAM 2	755.891	755.771	755.731	755.628	755.593	755.505
BEAM 3	755.711	755.593	755.553	755.452	755.417	755.330
BEAM 4	755.532	755.415	755.376	755.275	755.241	755.155
BEAM 5	755.353	755.237	755.198	755.099	755.066	754.980
BEAM 6	755.174	755.059	755.021	754.922	754.890	754.806

**TOP OF BEAM ELEVATIONS**  
(For fabrication only)

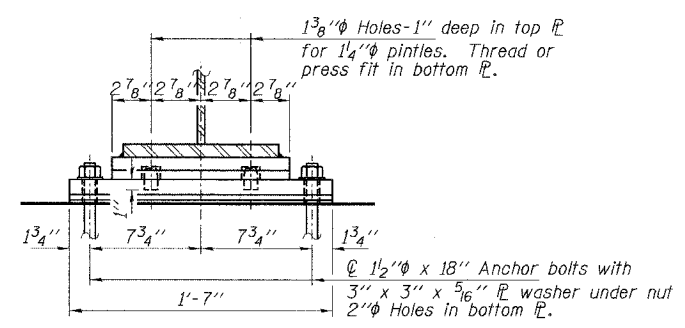
**HLR**  
 Rice, Berry and Associates  
 A Division of Hampton, Lenzini and Renwick, Inc.  
 Civil & Structural Engineers  
 3085 Stevenson Drive  
 Suite 201  
 Springfield, Illinois 62703  
 217-546-3400  
 P.O. Box 1036  
 DuQuoin, Illinois 62832  
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 Account Number 12-59-0033-1  
 Date: 11/15/05  
 DESIGNED: P.S.L. CHECKED: S.W.M. DRAWN: D.B.

**STRUCTURAL STEEL**  
 F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK  
 SECTION 00-00182-01-BR  
 McLEAN COUNTY  
 STRUCTURE 057-5306 / STATION 820+21

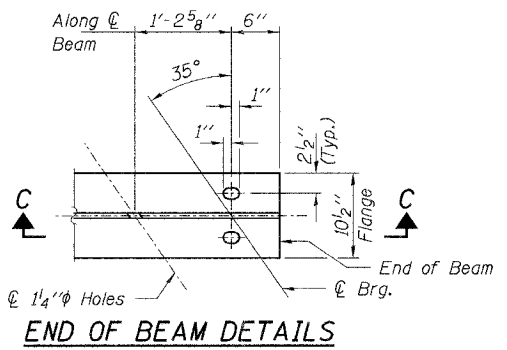
CONTRACT NO. 87269



ELEVATION AT PIER



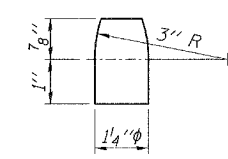
SECTION C-C



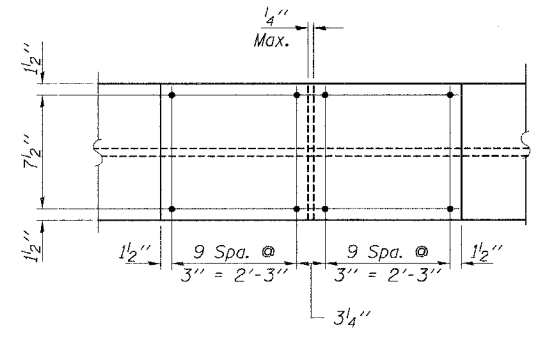
END OF BEAM DETAILS

	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
$I_s$	4,470	4,470	4,470	4,470	4,470
$I_c (n)$	12,987		12,987		12,987
$I_c (3n)$	9,739		9,739		9,739
$S_s$	299	299	299	299	299
$S_c (n)$	457		457		457
$S_c (3n)$	417		417		417
$Z$					
$\phi$	0.88	1.23	0.88	1.23	0.88
$M\phi$	124	296	113.8	439.3	244.2
$s\phi$	0.35		0.35		0.35
$M_s\phi$	55.5		70.3		109.7
$M\phi$	255.0	198.0	292	236.8	338.2
$M (Imp)$	68.5	55.5	78.8	64.0	91.6
$S_3[M\phi + M(Imp)]$	538.3	422.5	631.0	501.33	716.33
$M_a$	933	934	1,060	1,222.8	1,391.3
$M_u$	2,170	1,246	2,170	1,246	2,170
$f_s\phi$ non-comp (k.s.i.)	5.0	11.9	4.57	17.6	9.8
$f_s\phi$ (comp) (k.s.i.)	1.6		1.85		2.9
$f_s\phi_3 (\phi + Imp)$ (k.s.i.)	14.2	17.0	17.8	14.4	18.8
$f_s$ (Overload) (k.s.i.)	20.8	28.9	24.2	32.0	31.5
$f_s$ (Total) (k.s.i.)	27	37.6	39.8	41.6	41.0
$VR$	40.4		42.6		43.8

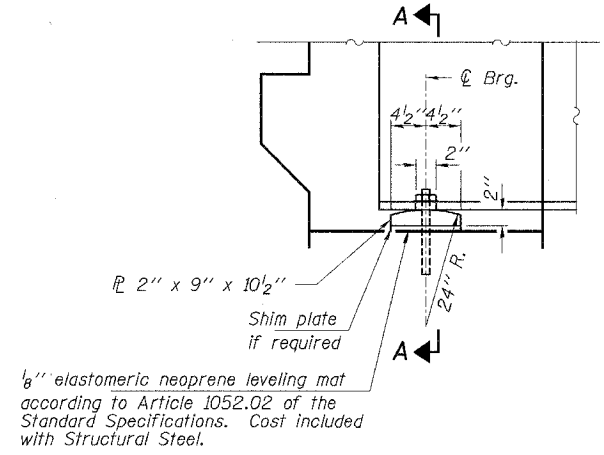
FIXED BEARING



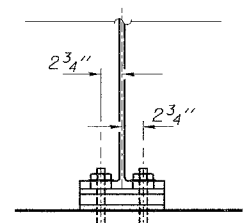
PINTLE



SECTION B-B



ELEVATION AT ABUTMENT



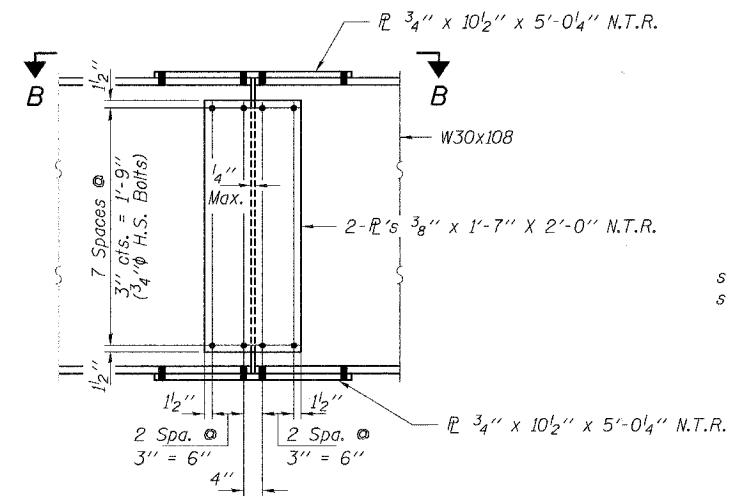
SECTION A-A

	N. Abutment	Pier 1	Pier 1	N. Abutment
$R\phi$	21.0	68.6	83.3	29.5
$R\phi$	28.3	45.8	49.5	31.0
$R Imp.$	8.2	12.8	13.4	8.4
$R (Total)$	57.6	127.2	146.2	68.9

$I_s$  and  $S_s$  are the moment of inertia and section modulus of the steel section used in computing  $f_s$  (Total & Overload).  
 $I_c(n)$  and  $S_c(3n)$  are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.  
 $I_c(3n)$  and  $S_c(3n)$  are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (See AASHTO 10.38).  
 $VR$  is the maximum Live Load + Impact shear range within the composite portion of the span.  
 $Z$  is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite area.  
The Plastic Moment capacity ( $M_u$ ) is computed according to AASHTO 10.48.1 & 10.50.1.1.  
 $f_s$  (Total) is the sum of the stresses due to  $1.3[M\phi + M_s\phi + 5_3(M\phi + M(Imp))]$ .  
 $f_s$  (Overload) is the sum of the stresses due to  $M\phi + M_s\phi + 5_3(M\phi + M(Imp))$ .  
 $M\phi$  - Moment due to dead loads on non-composite section.  
 $M_s\phi$  - Moment due to dead loads on composite section.  
 $M\phi$  - Moment due to live load on non-composite or composite section.  
 $M(Imp)$  - Moment due to live load impact on non-composite or composite section.  
 $M_a$  (Applied Moment) =  $1.3[M\phi + M_s\phi + 5_3(M\phi + M(Imp))]$ .

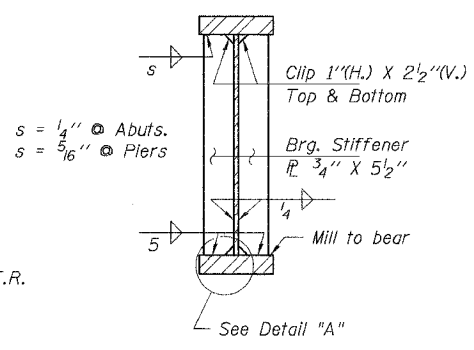
BEARING AT ABUTMENT  
(12 Required)

Notes:  
Anchor bolts at bearings may be built into the masonry.  
See sheet 26 for Anchor Bolt installation.

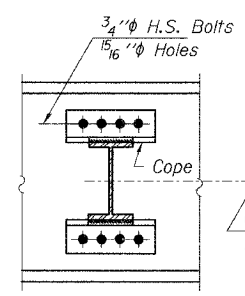


SPLICE

3/4" H.S. Bolts (Typ.)

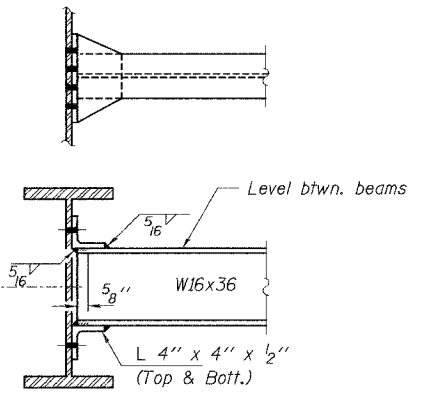


SECTION AT ABUTS. & PIERS



DIAPHRAGM D

54 Required



DETAIL "A"

**HLR**  
Rice, Berry and Associates  
A Division of Hampton,  
Lenzini and Renwick, Inc.  
Civil & Structural Engineers  
3085 Stevenson Drive  
Suite 201  
Springfield, Illinois 62703  
217-546-3400  
P.O. Box 1036  
DuQuoin, Illinois 62832  
618-790-4637  
Date: 11/15/05  
DESIGNED: P.S.L. CHECKED: S.W.M. DRAWN: D.B.

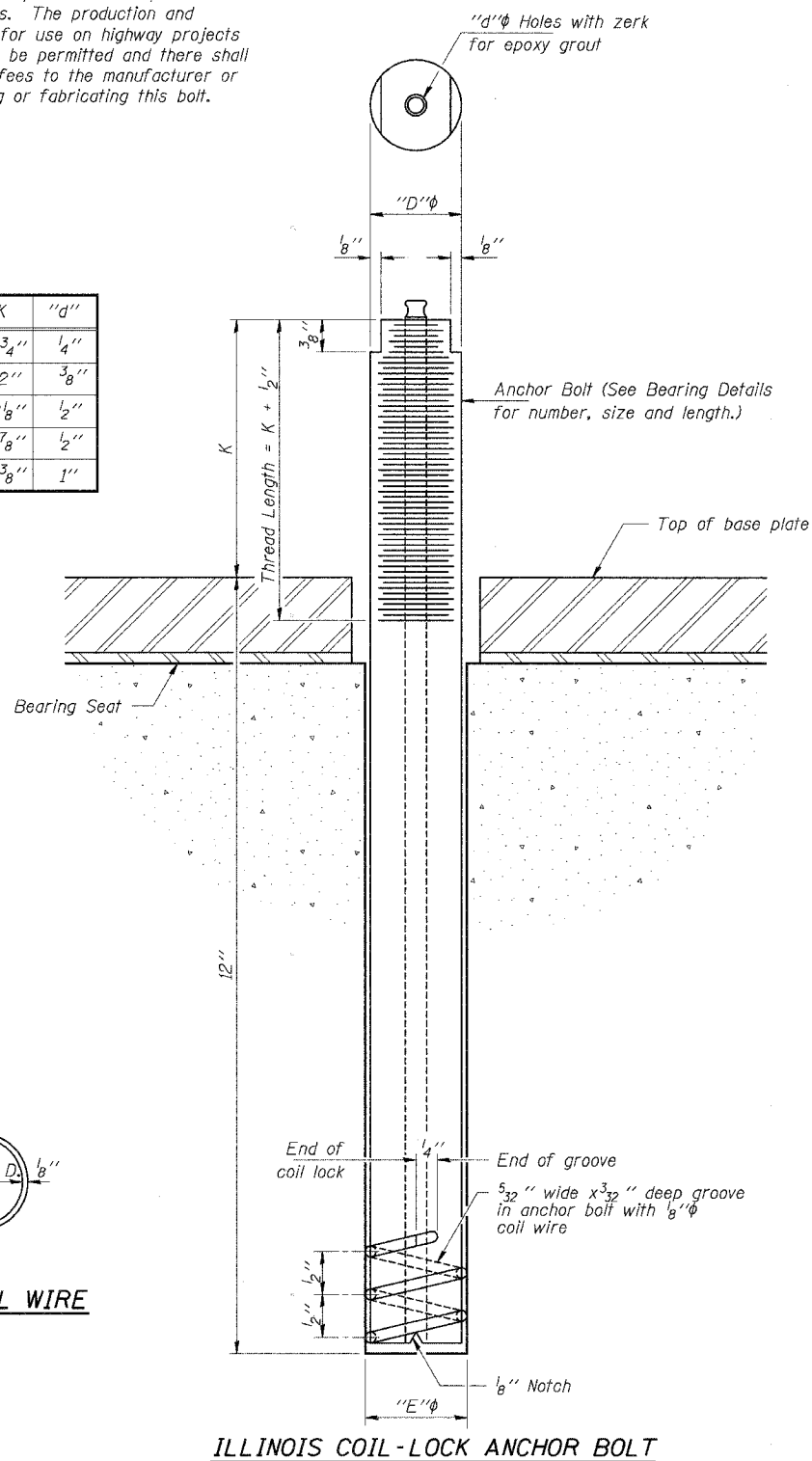
**STRUCTURAL STEEL**  
F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK  
SECTION 00-00182-01-BR  
McLEAN COUNTY  
STRUCTURE 057-5306 / STATION 820+21

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 6385	00-00182 -01-BR	McLEAN	33	26
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT - BFM-82742	

CONTRACT NO. 87269

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/2"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 3/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



### MATERIALS FOR ILLINOIS COIL-LOCK

#### ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire. The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed. The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

#### INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

#### ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
Abutments	A325
Piers	A325

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

#### GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".

**HLR**  
Rice, Berry and Associates  
A Division of Hampton,  
Lenzini and Renwick, Inc.  
Civil & Structural Engineers  
3085 Stevenson Drive  
Suite 201  
Springfield, Illinois 62703  
217-546-3400  
P.O. Box 1036  
DuQuoin, Illinois 62832  
618-790-4637  
Account Number  
12-59-0033-1  
Date: 11/15/05  
DESIGNED: P.S.L. CHECKED: S.W.M. DRAWN: D.B.

**ANCHOR BOLT DETAILS**  
F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK  
SECTION 00-00182-01-BR  
McLEAN COUNTY  
STRUCTURE 057-5306 / STATION 820+21

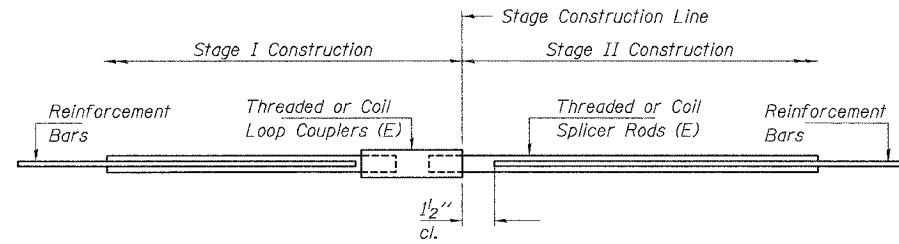
CONTRACT NO. 87269

**NOTES**

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.  
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.  
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.  
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

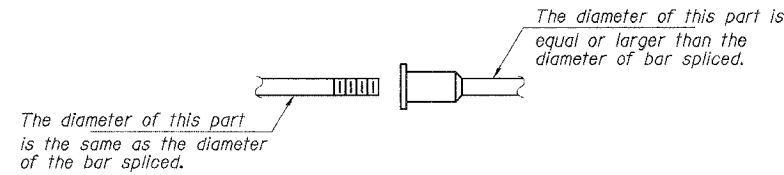
- ① Minimum Capacity =  $1.25 \times f_y \times A_t$   
(Tension in kips)
- ② Minimum \*Pull-out Strength =  $1.25 \times f_{s_{allow}} \times A_t$   
(Tension in kips)

Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $f_{s_{allow}}$  = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)  
 $A_t$  = Tensile stress area of lapped reinforcement bars.  
 \* = 28 day concrete



**SPLICER DETAIL**

Bar Size	No. Assemblies Required	Location



**ROLLED THREAD DOWEL BAR**



**\*\* ONE PIECE**

Wire Connector



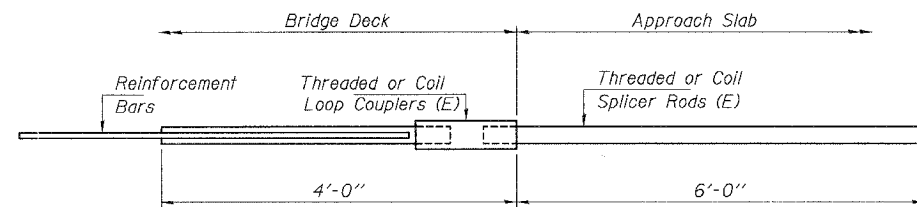
**WELDED SECTIONS**

**BAR SPLICER ASSEMBLY ALTERNATIVES**

\*\* Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.

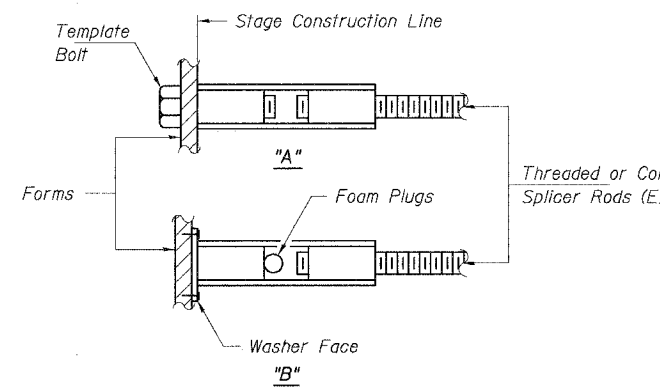
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



**INTEGRAL ABUTMENT  
BAR SPLICER ASSEMBLY DETAIL  
FOR #5 BAR**

Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 82



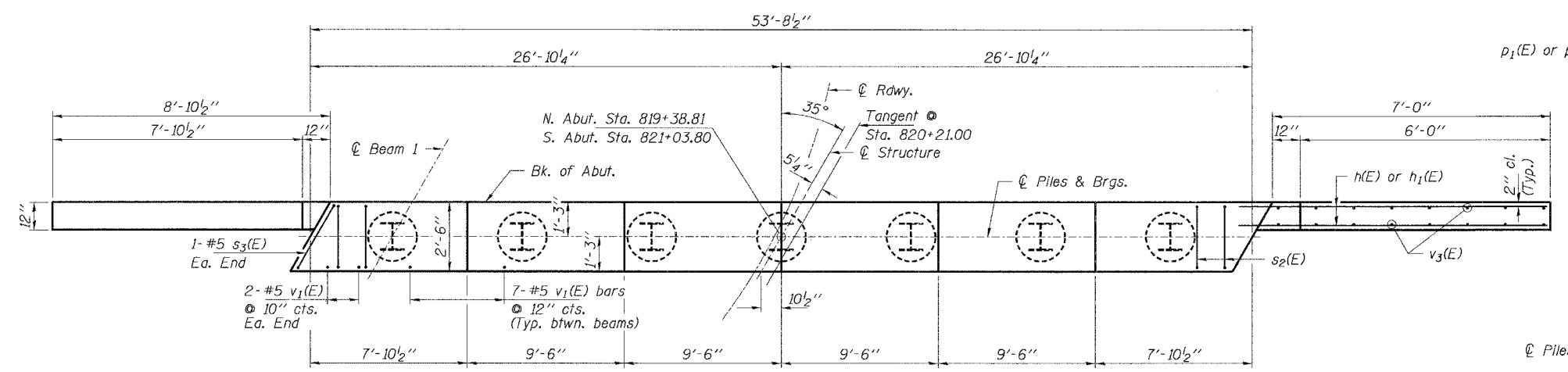
**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.  
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
 (E) : Indicates epoxy coating.

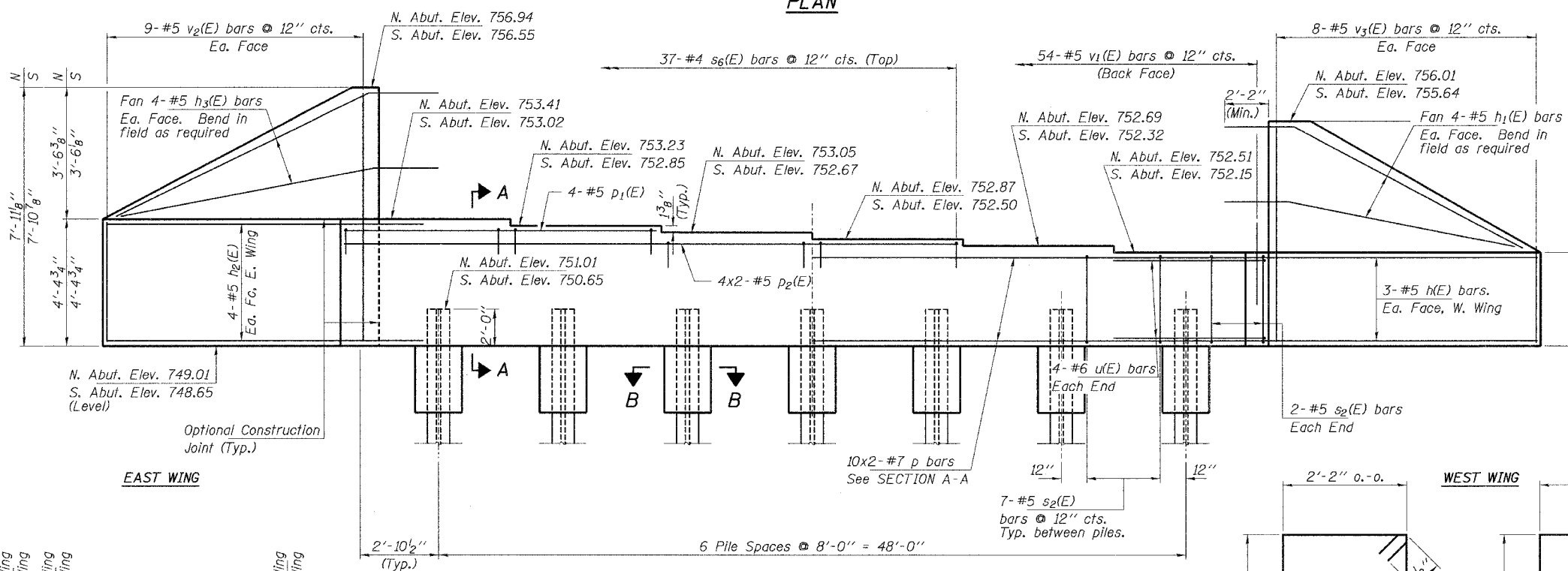
**HLR**  
 Rice, Barry and Associates  
 A Division of Hampton,  
 Lenzini and Renwick, Inc.  
 Civil & Structural Engineers  
 3085 Stevenson Drive  
 Suite 201  
 Springfield, Illinois 62703  
 217-546-3400  
 P.O. Box 1036  
 DuQuoin, Illinois 62832  
 618-790-4637  
 Account Number 12-59-0033-1  
 Date: 11/15/05  
 DESIGNED: P.S.L. CHECKED: S.W.M. DRAWN: D.B.

**BAR SPLICERS**  
 F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK  
 SECTION 00-00182-01-BR  
 McLEAN COUNTY  
 STRUCTURE 057-5306 / STATION 820+21

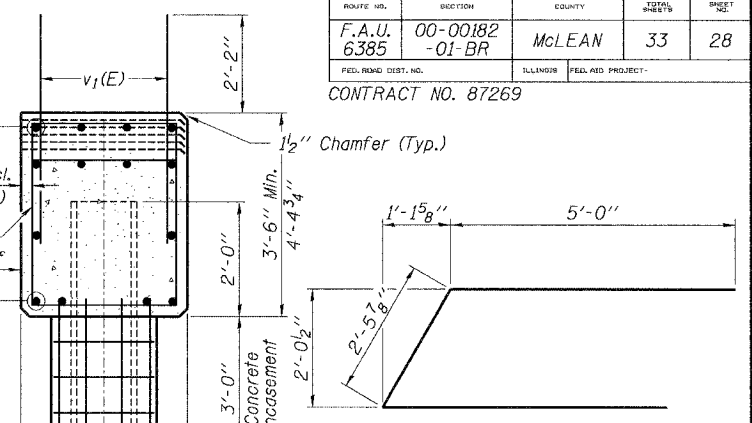
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
F.A.U. 6385	00-00182-01-BR	McLEAN	33	28
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 87269				



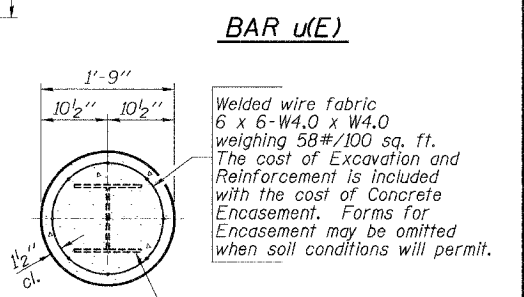
**PLAN**



**ELEVATION**  
(South Abutment looking South, North Abutment opposite hand.)



**SECTION A-A**



**SECTION B-B**

**PILE ENCASEMENT DETAIL**

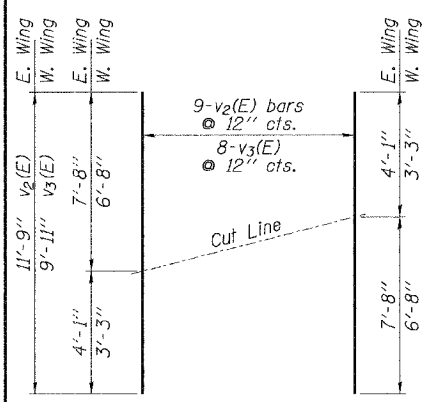
**BILL OF MATERIAL - BOTH ABUTS.**

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	12	#5	9'-2"	—
h1(E)	16	#5	10'-0"	—
h2(E)	16	#5	11'-0"	—
h3(E)	16	#5	11'-8"	—
p(E)	40	#7	28'-5"	—
p1(E)	8	#5	17'-1"	—
p2(E)	16	#5	19'-2"	—
s2(E)	92	#5	11'-7"	□
s3(E)	4	#5	12'-5"	□
s6(E)	74	#5	4'-2"	—
u(E)	16	#6	12'-6"	—
v1(E)	200	#5	4'-4"	—
v2(E)	18	#5	11'-9"	—
v3(E)	16	#5	9'-11"	—
Concrete Structures			Cu. Yd.	47.8
Reinforcement Bars, Epoxy Coated			Pound	6,520
Steel Piles HP 10x57			Foot	520
Test Pile Steel HP 10x57			Each	1
Concrete Encasement			Cu. Yd.	3.8

Bars indicated thus 10x2-#7 etc. indicates 10 lines of bars with 2 lengths per line. Reinforcement Bars designated (E) shall be epoxy coated.

**EAST WING**

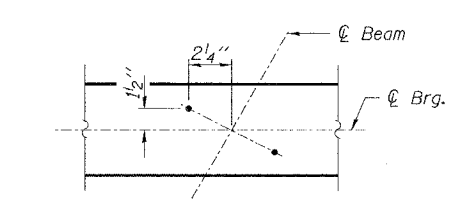
**WEST WING**



**FIELD CUTTING DIAGRAM**

Order v2(E) & v3(E) full length. Cut as shown and use remainder of bars in opposite face.

**MIN. BAR LAPS**  
#5 = 2'-2"  
#7 = 3'-5"



**TYP. ANCHOR BOLT LOCATIONS**

Note: Space reinforcement in the cap to miss anchor bolts.  
The contractor shall precure hole at the North Abut. to a minimum of 4 feet below the adjacent waterline top of pipe elevation. An additional 10 tons has been added to the design capacity for negative skin friction loading.

**BAR s6(E)**

**BAR s2(E)**

**BAR s3(E)**

**PILE DATA**

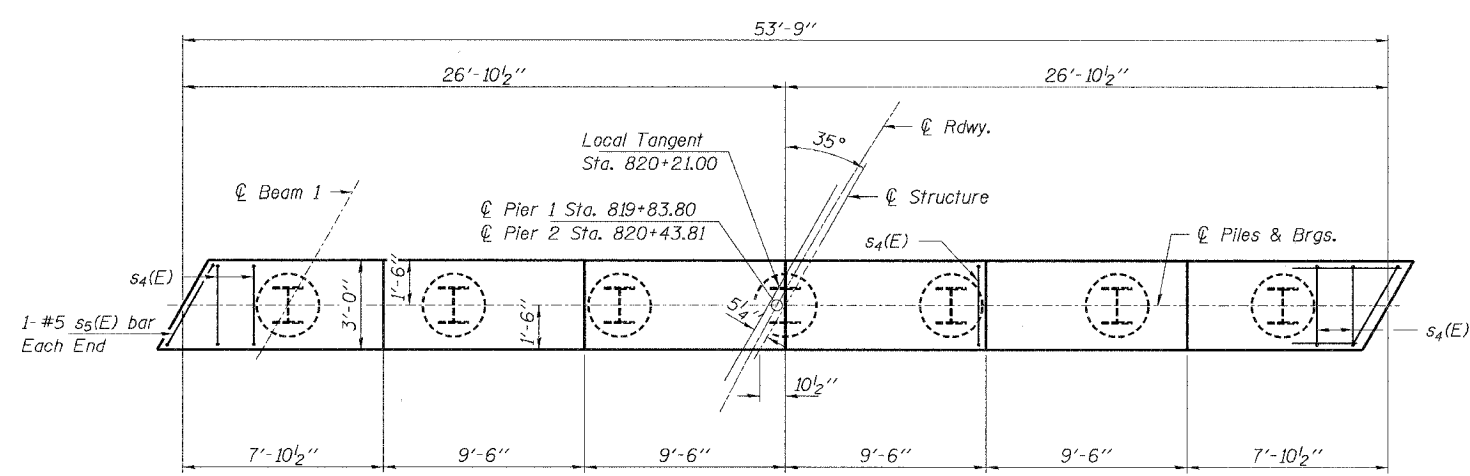
Type ----- Steel HP10x57  
No. Req'd. (2 Abutments) ----- \*14  
Capacity ----- 56 T/Pile  
Estimated Lengths ----- 40 Ft./Pile  
\* Includes one steel test pile to be driven in a permanent location at South Abutment.

**HLR**  
Rice, Berry and Associates  
A Division of Hampton, Lenzini and Renwick, Inc.  
Civil & Structural Engineers  
3085 Stevenson Drive  
Suite 201  
Springfield, Illinois 62703  
217-546-3400  
P.O. Box 1036  
DuQuoin, Illinois 62832  
618-790-4637  
Date: 11/15/05  
DESIGNED: P.S.L. CHECKED: S.W.M. DRAWN: D.B.

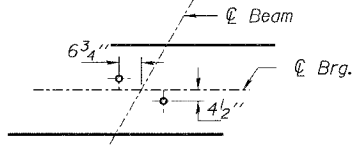
**ABUTMENTS**  
F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK  
SECTION 00-00182-01-BR  
McLEAN COUNTY  
STRUCTURE 057-5306 / STATION 820+21

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 1685	00-00182-01-BR	McLEAN	33	29
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

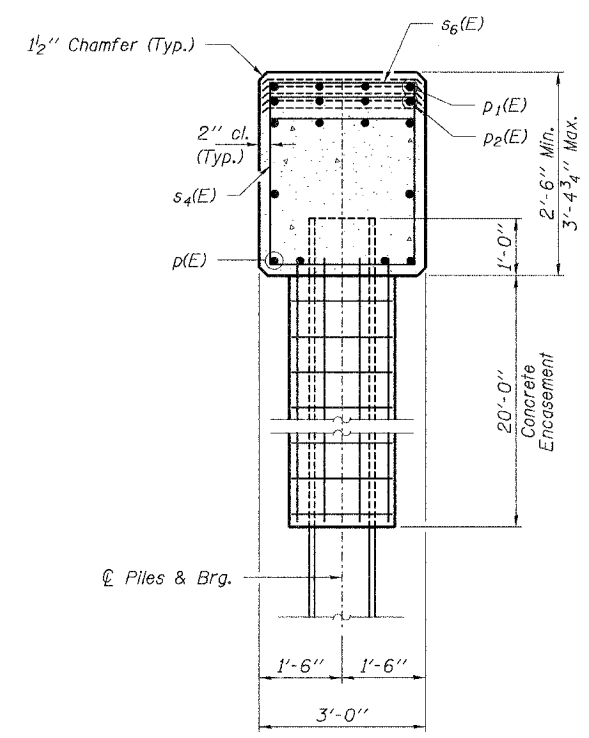
CONTRACT NO. 87269



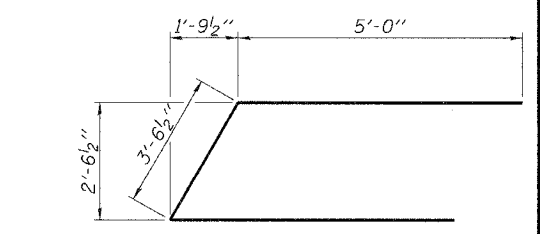
**PLAN**



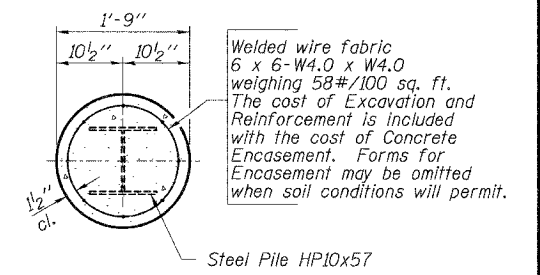
**TYPICAL ANCHOR BOLT LOCATIONS**  
Note: Space reinforcement in cap to miss anchor bolts.



**SECTION A-A**

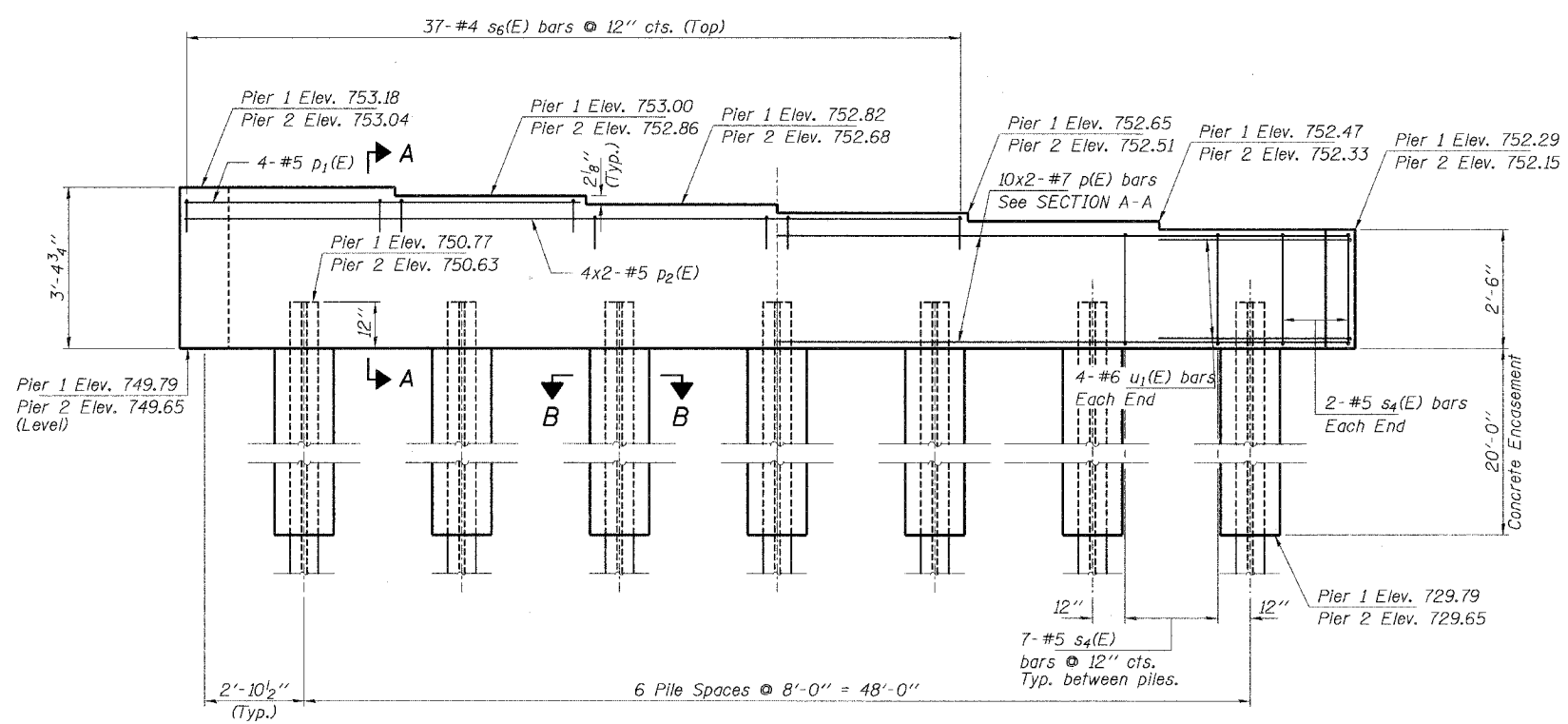


**BAR u1(E)**



**SECTION B-B**

**PILE ENCASEMENT DETAIL**



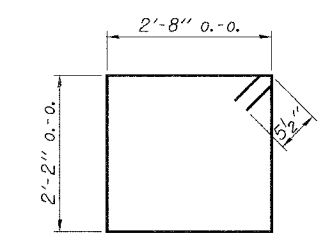
**ELEVATION**  
(Looking South)

**MIN. BAR LAPS**  
#5 = 2'-2"  
#7 = 3'-5"

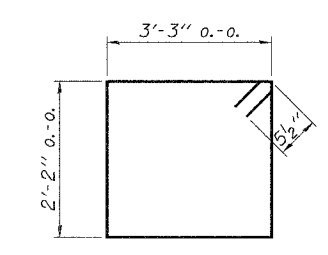
**PILE DATA**

Type \_\_\_\_\_ Steel HP10x57  
No. Req'd. (2 Abut.) \_\_\_\_\_ \*14  
Capacity \_\_\_\_\_ 60 Tons/Pile  
Estimated Lengths \_\_\_\_\_ 60 Ft/Pile

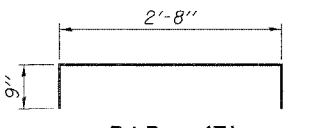
\* Includes one steel test pile to be driven in a permanent location at Pier 1.



**BAR s4(E)**



**BAR s5(E)**



**BAR s6(E)**

**BILL OF MATERIAL - BOTH PIERS**

BAR	NO.	SIZE	LENGTH	SHAPE
p(E)	40	#7	28'-5"	—
p1(E)	8	#5	17'-1"	—
p2(E)	16	#5	19'-2"	—
s4(E)	92	#5	10'-7"	□
s5(E)	4	#5	11'-9"	□
s6(E)	74	#4	4'-2"	┌
u1(E)	16	#6	13'-2"	—
Concrete Structures			Cu. Yd.	35.2
Reinforcement Bars, Epoxy Coated			Pound	4,370
Steel Piles HP 10x57			Foot	780
Test Pile Steel HP 10x57			Each	1
Concrete Encasement			Cu. Yd.	25.0

Bars indicated thus 10x2-#7 etc. indicates 10 lines of bars with 2 lengths per line.  
Reinforcement Bars designated (E) shall be epoxy coated.

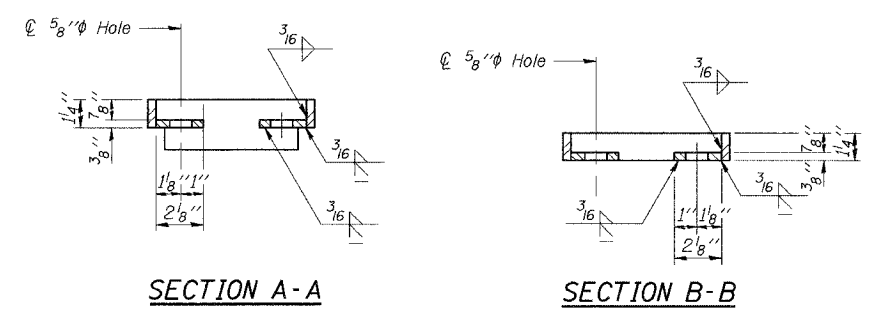
**ILR**  
Rice, Berry and Associates  
A Division of Hampton,  
Lenzini and Benwick, Inc.  
Civil & Structural Engineers  
3085 Stevenson Drive  
Suite 201  
Springfield, Illinois 62703  
217-546-3400  
P.O. Box 1036  
DuQuoin, Illinois 62832  
618-790-4637  
Date: 11/15/05  
DESIGNED: P.S.L. | CHECKED: S.W.M. | DRAWN: D.B.

**PIERS**  
F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK  
SECTION 00-00182-01-BR  
McLEAN COUNTY  
STRUCTURE 057-5306 / STATION 820+21



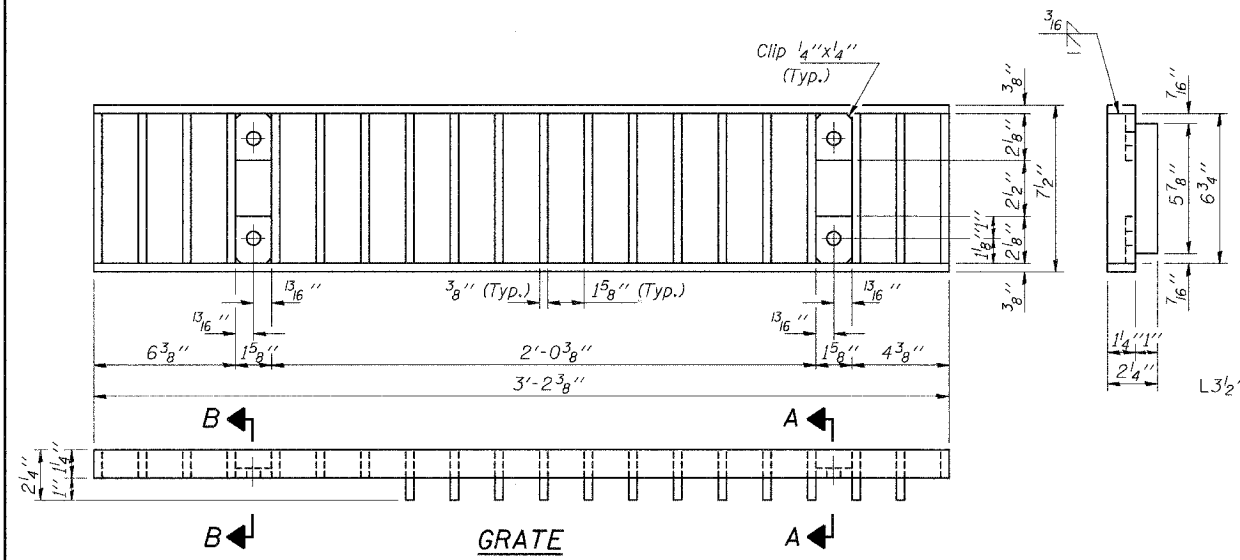
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET
F.A.U. 6385	00-00182-01-BR	McLEAN	33	30
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT - BRN-622743	

CONTRACT NO. 87269  
3'-3"

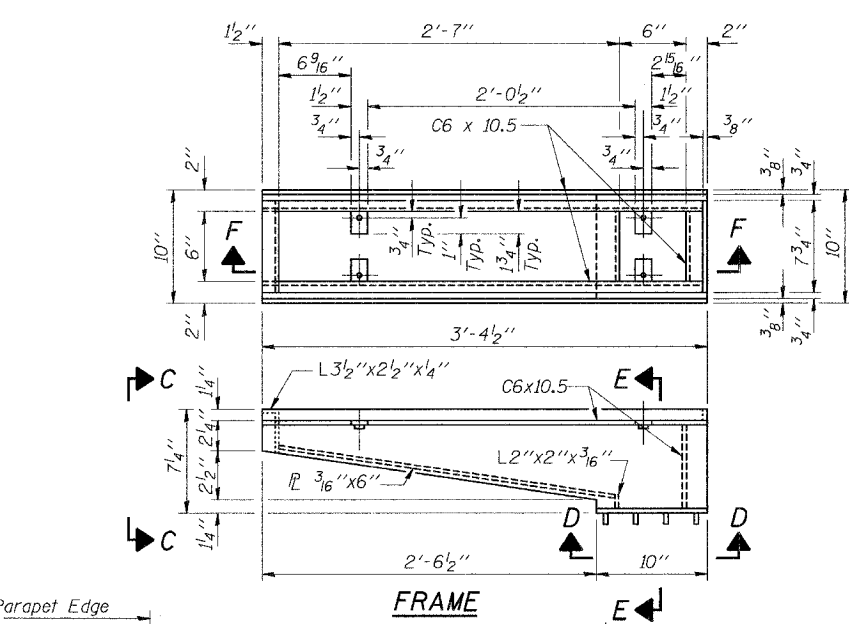


SECTION A-A

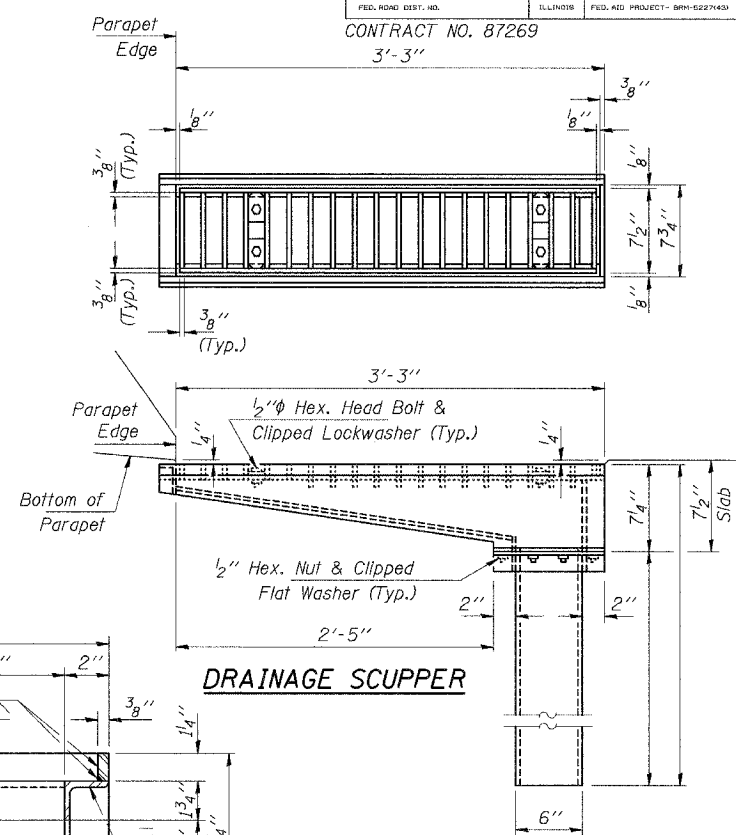
SECTION B-B



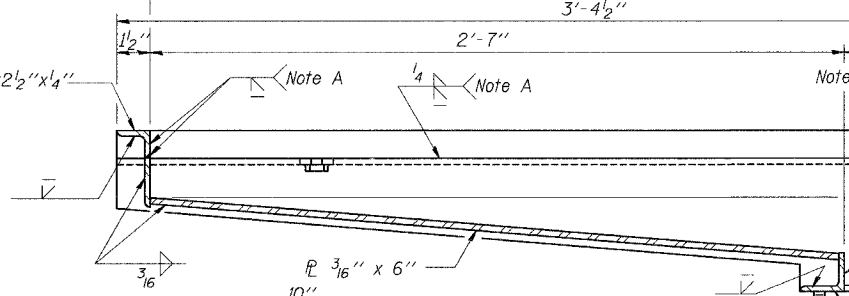
GRATE



FRAME

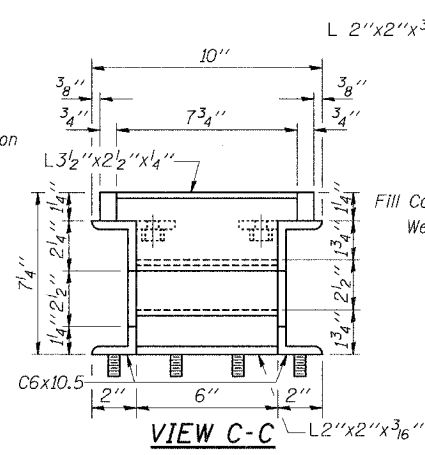


DRAINAGE SCUPPER

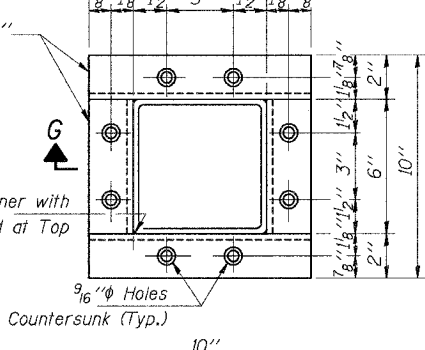


SECTION F-F

Notes: Hollow structural steel tubing shall conform to the requirements of ASTM designation A500 Grade B, or A501 Structural Steel Tubing.  
All other shapes, plates and bars shall conform to the requirements of AASHTO M270 Grade 36.  
Bolts, studs, washers and nuts shall conform to the requirements of ASTM A307.  
The Grate, Frame and Downspout shall be galvanized after shop fabrication in accordance with AASHTO M111 & ASTM A385.  
All bolts, washers and nuts shall be galvanized in accordance with AASHTO M232.  
Cost of the Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper will be paid for at the unit bid price each for "DRAINAGE SCUPPERS."

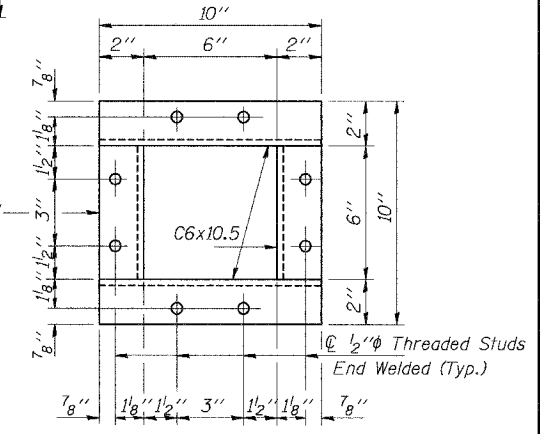


VIEW C-C

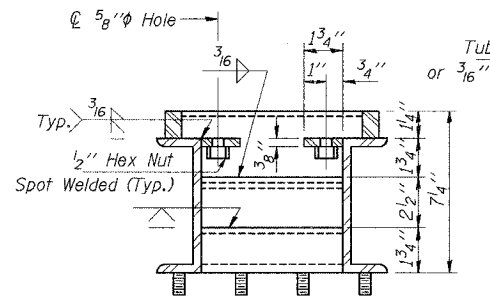


SECTION G-G

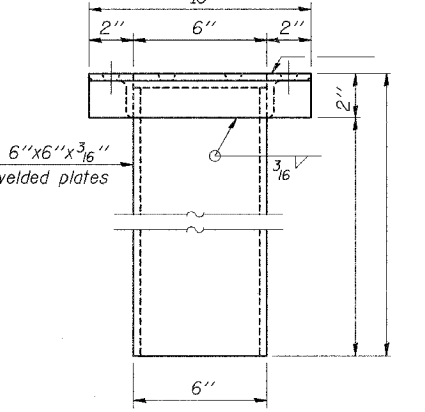
Note A: Surface of welds shall be recessed 1/16" Max. or placed flush with inside face of bars to provide clearance for Grate.



VIEW D-D



SECTION E-E



DOWNSPOUT

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper	Each	2

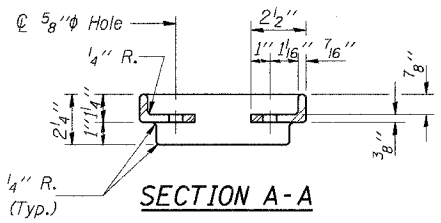
(Sheet 1 of 2)

**HLR**  
Rice, Berry and Associates  
A Division of Hampton,  
Lenzini and Renwick, Inc.  
Civil & Structural Engineers  
3085 Stevenson Drive  
Suite 201  
Springfield, Illinois 62703  
217-546-3400  
P.O. Box 1036  
DuQuoin, Illinois 62832  
618-790-4637  
Date: 11/15/05  
DESIGNED: P.S.L. CHECKED: S.W.M. DRAWN: D.B.

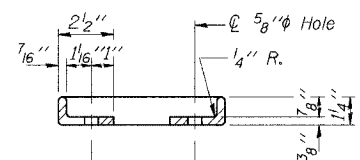
**STEEL DRAINAGE SCUPPER**  
F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK  
SECTION 00-00182-01-BR  
McLEAN COUNTY  
STRUCTURE 057-5306 / STATION 820+21

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET
F.A.U. 6385	00-00182 -01-BR	McLEAN	33	31
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT - 894-622743	

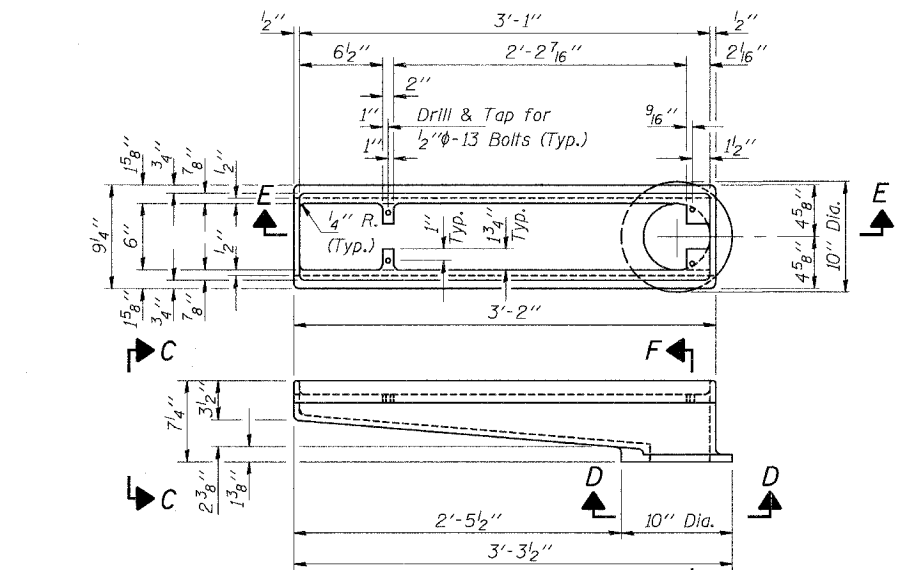
CONTRACT NO. 87269  
3'-1"



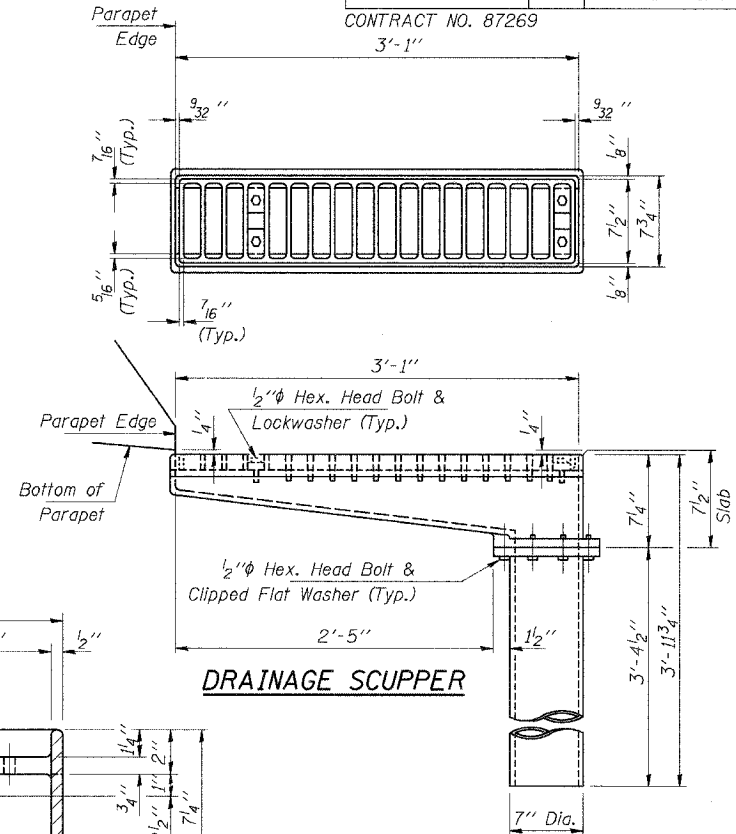
SECTION A-A



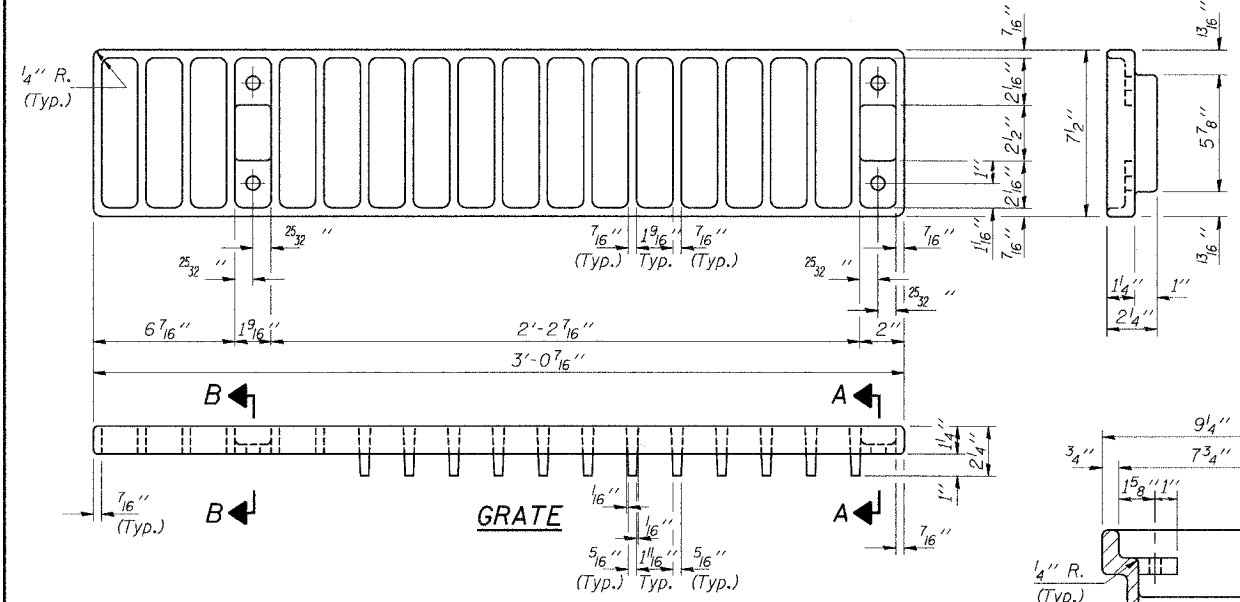
SECTION B-B



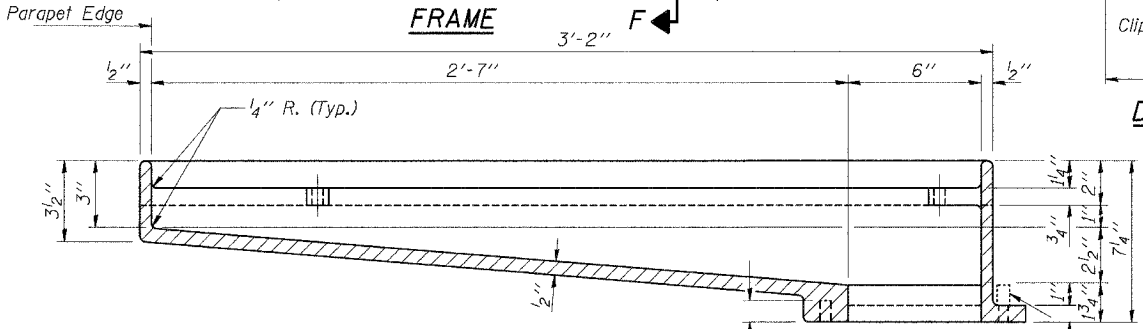
FRAME



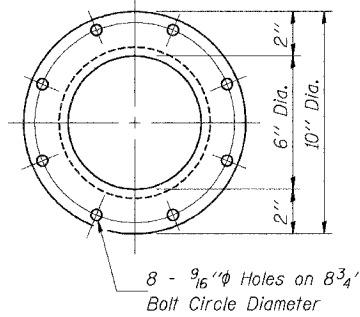
DRAINAGE SCUPPER



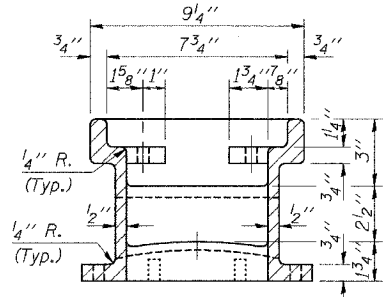
GRATE



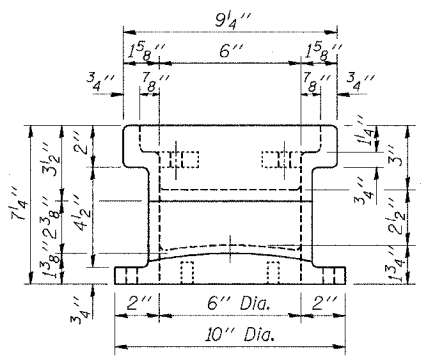
SECTION E-E



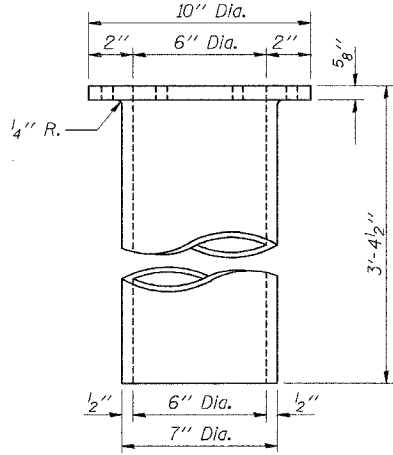
VIEW D-D



SECTION F-F



VIEW C-C



DOWNSPOUT

Notes: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M105, Class 30.  
Bolts and washers shall conform to the requirements of ASTM A307.  
All bolts and washers shall be galvanized in accordance with AASHTO M232.  
As an alternate bolts and washers may be stainless steel conforming to the requirements of ASTM A193, Type 304.  
Cost of the Grate, Frame, Downspout, bolts and washers including complete installation of Scupper will be paid for at the unit bid price each for "DRAINAGE SCUPPERS."  
The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers.

**HLR**  
Rice, Berry and Associates  
A Division of Hampton, Lenzini and Renwick, Inc.  
Civil & Structural Engineers  
3085 Stevenson Drive  
Suite 201  
Springfield, Illinois 62703  
217-546-3400  
P.O. Box 1036  
DuQuoin, Illinois 62832  
618-790-4637  
Date: 8/15/05  
DESIGNED: P.S.L. CHECKED: S.W.M. DRAWN: D.B.

(Sheet 2 of 2)  
**ALTERNATE - CAST IRON DRAINAGE SCUPPER**  
F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK  
SECTION 00-00182-01-BR  
McLEAN COUNTY  
STRUCTURE 057-5306 / STATION 820+21



CONTRACT NO. 87269

LOG OF BORING NO. 2									
CLIENT					ENGINEER				
McLEAN COUNTY HIGHWAY DEPARTMENT					McLEAN COUNTY HIGHWAY DEPARTMENT				
SITE GRAHAM ST & WHITE OAK RD (OLD 150) BLOOMINGTON, ILLINOIS					PROJECT SUGAR CREEK BRIDGE (OLD 150) IMPROVEMENTS				
Approx. Boring Location: SE 12' E. of road edge									
DEPTH, ft.	USCS SYMBOL	NUMBER	TYPE	RECOVERY, in.	SPT - N <sup>**</sup> BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	TESTS	
								UNCONFINED STRENGTH, pcf	
DESCRIPTION									
755.6 U.S.G.S. = 100.0									
Approx. Surface Elev.: 98.5 (BM=100, Center of Bridge)									
0		1	SS	12	7	14		*8000	
5		2	HS	16	14	14		*8000+	
10		3	SS	18	11	12		*8000	
15		4	SS	4	WOH	18			
20		5	SS	12	6	21		*1000	
25		6	SS	10	34	12			
30		7	SS	12	32	10			
35		8	SS	16	6	13		*2000	
37.5			HS						
40			HS						
45			HS						
50			HS						
55			HS						
60			HS						
65			HS						
70			HS						
71.5			HS						
72.1			HS						
73.1			HS						
74.1			HS						
77.5			HS						
88.5			HS						

Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual. \*Pocket Penetrometer \*\*CME 140 lb. SPT automatic hammer

WATER LEVEL OBSERVATIONS, ft		BORING STARTED	4-22-05
WL 22	WS	BORING COMPLETED	4-22-05
WL	WS	RIG	94 FOREMAN
WL	WS	APPROVED TWS	JOB # 10055010

LOG OF BORING NO. 2									
CLIENT					ENGINEER				
McLEAN COUNTY HIGHWAY DEPARTMENT					McLEAN COUNTY HIGHWAY DEPARTMENT				
SITE GRAHAM ST & WHITE OAK RD (OLD 150) BLOOMINGTON, ILLINOIS					PROJECT SUGAR CREEK BRIDGE (OLD 150) IMPROVEMENTS				
Approx. Boring Location: SE 12' E. of road edge									
DEPTH, ft.	USCS SYMBOL	NUMBER	TYPE	RECOVERY, in.	SPT - N <sup>**</sup> BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	TESTS	
								UNCONFINED STRENGTH, pcf	
DESCRIPTION									
720.6									
33.5	SC	9	SS	4	WOH	16			
35			HS			18			
37.5			HS						
40	SP	10	SS	14	10	10			
45			HS						
50	SP	11	SS	14	24	16			
55			HS						
60	SP	12	SS	12	25	15			
65			HS						
70	SP	13	SS	16	45	14			
75			HS						
80	CL	14	SS	14	61	8		*9000+	
85			HS						
90	CL	15	SS	8	50/5"	9		*9000+	
95			HS						

Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual. \*Pocket Penetrometer \*\*CME 140 lb. SPT automatic hammer

WATER LEVEL OBSERVATIONS, ft		BORING STARTED	4-22-05
WL 22	WS	BORING COMPLETED	4-22-05
WL	WS	RIG	94 FOREMAN
WL	WS	APPROVED TWS	JOB # 10055010

LOG OF BORING NO. 2									
CLIENT					ENGINEER				
McLEAN COUNTY HIGHWAY DEPARTMENT					McLEAN COUNTY HIGHWAY DEPARTMENT				
SITE GRAHAM ST & WHITE OAK RD (OLD 150) BLOOMINGTON, ILLINOIS					PROJECT SUGAR CREEK BRIDGE (OLD 150) IMPROVEMENTS				
Approx. Boring Location: SE 12' E. of road edge									
DEPTH, ft.	USCS SYMBOL	NUMBER	TYPE	RECOVERY, in.	SPT - N <sup>**</sup> BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	TESTS	
								UNCONFINED STRENGTH, pcf	
DESCRIPTION									
684.1									
70	CL	16	SS	14	55/6" 50/3"	9		*9000+	
BOTTOM OF BORING									
Note: WOH = Split-barrel sampler advanced under dead weight of SPT hammer.									

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual. \*Pocket Penetrometer \*\*CME 140 lb. SPT automatic hammer

WATER LEVEL OBSERVATIONS, ft		BORING STARTED	4-22-05
WL 22	WS	BORING COMPLETED	4-22-05
WL	WS	RIG	94 FOREMAN
WL	WS	APPROVED TWS	JOB # 10055010

BORING 2

**HLR**  
 Rice, Berry and Associates  
 A Division of Hampton, Lenzini and Renwick, Inc.  
 Civil & Structural Engineers  
 3085 Stevenson Drive  
 Suite 201  
 Springfield, Illinois 62703  
 217-546-3400  
 P.O. Box 1036  
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 618-790-4637  
 Account Number 12-59-0033-1  
 Date: 4/15/05  
 DESIGNED: P.S.L. CHECKED: S.W.M. DRAWN: D.B.

**BORING 2**  
 F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK  
 SECTION 00-00182-01-BR  
 McLEAN COUNTY  
 STRUCTURE 057-5306 / STATION 820+21